NT-2

SERVICE MANUAL

Tourist Model

Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MN-2-113

SPECIFICATIONS

General

Format	NT format
Tape	Digital micro tape (NT cassette tape)
Recording system	Helical scan 2 heads, digital recording
Recording head	4 heads
Recording time	60 minutes (with the supplied NTC-60)
Tape speed	Approx. 6.35 mm/s
Drum rotation	Approx. 3000 rpm
Error correction	Cross-interleaving code
Track pitch	Approx. 9.8 µm
Sampling frequency	32 kHz
Modulation system	LDM-2
Number of channels	2-channel, stereo
Quantization	12-bit non-linear (equivalent to 17 – bit)
Frequency response	10 Hz to 15,000 Hz (+1, –3dB)
Signal-to-noise ratio	More than 80 dB (1 kHz, IHF-A, 20 kHz LPF, LINE IN)
Dynamic range	More than 80 dB (1 kHz, IHF-A, 20 kHz LPF, LINE IN)
Total harmonic distortion	Less than 0.08%
Wow and flutter	Below measurable limit (less than 0.001% W.PEAK)

Input

	Jack type	Rated input level	Minimum input level
MIC	stereo minijack	1.38 mV	0.55 mV
LINE IN	stereo minijack	160 mV	64 mV

Output

	Jack type	Rated output level	Maximum output level	Load impedance
HEADPHONES	stereo minijack	—	5 mW + 5 mW	16 ohms
LINE OUT	stereo minijack	160 mV	—	47 kohms

General

Power requirements	DC 1.5 V LR6 (size AA) battery or AC power adaptor
Battery life	Approx. 6 hours (consecutive recording) Approx. 4.5 hours (consecutive playback) (Sony alkaline battery LR6 (SG))
Lithium battery life	Approx. 1 year
Power consumption	Approx. 300 mW
Dimensions	Approx. 112.8 × 22 × 63mm (w/h/d) (4 1/2 × 7/8 × 2 1/2 inches) including projecting parts
Mass	Approx. 155 g (5.1 oz) Approx. 210 g (7.4 oz) (including the headphones, Sony alkaline battery LR6(SG), and an NT cassette tape NTC-60)

Supplied accessories

Lithium battery CR1220 (1)
AC power adaptor AC-NT2 (1)
Line cable (phono plug × 2 — stereo miniplug, stereo for line input and outputs) (1)
Stereo microphone C-3001 (1)
NT cassette tape NTC-60 (1)
Stereo headphones MDR-E565MP with remote controller (1)
Carrying case (1)

Design and specifications are subject to change without notice.

DIGITAL MICRO RECORDER

SONY®

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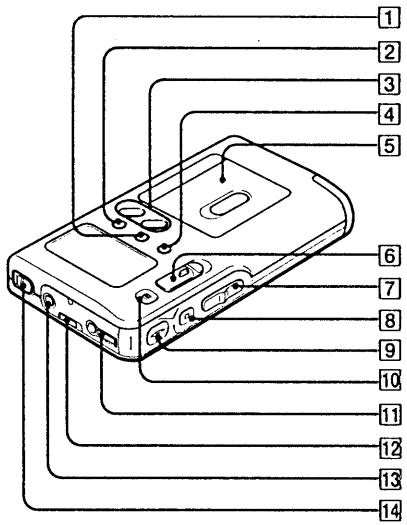
Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

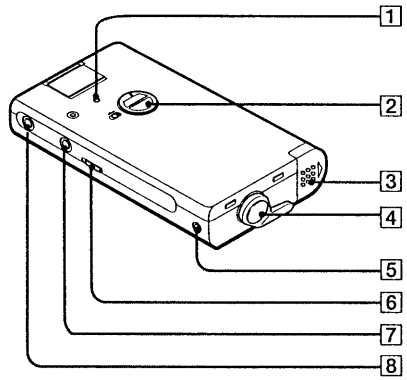
Looking at the controls

The recorder



1 FUNCTION button
2 COUNTER RESET button
3 +/– (volume) buttons
4 MODE button
5 Cassette holder
6 REC (record) switch
7 FF (fast forward) /REW (rewind) button
8 ■ (stop) button
9 ◄► (play/direction) button
10 ❚❚ (pause) button
11 REMOTE/🎧 (headphones) jack
12 MIC SENS (microphone sensitivity) switch
13 MIC (microphone) jack
14 HOLD switch

Rear of the recorder

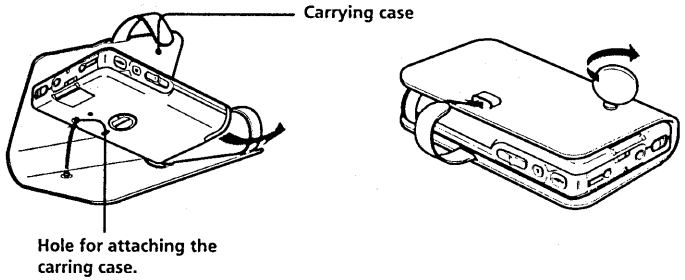


1 CLOCK SET button
2 Lithium battery compartment
3 Dry battery compartment
4 EJECT lever
5 DC IN 1.5V (DC input) jack
6 DIR MODE (direction mode) switch
7 LINE OUT jack
8 LINE IN jack

This section is extracted from instruction manual.

How to attach the carring case

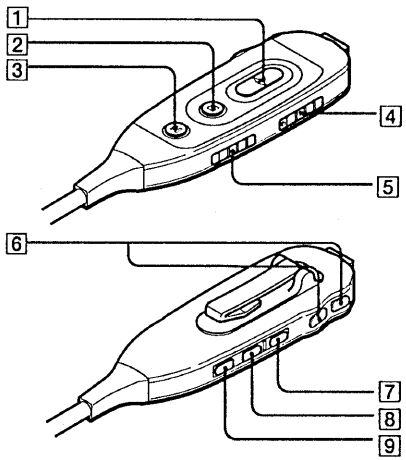
Fit the screw on the carring case to the hole on the recorder and fasten the screw.



Note

To avoid damage to the carring case, do not leave the headphones cord wound round the case.

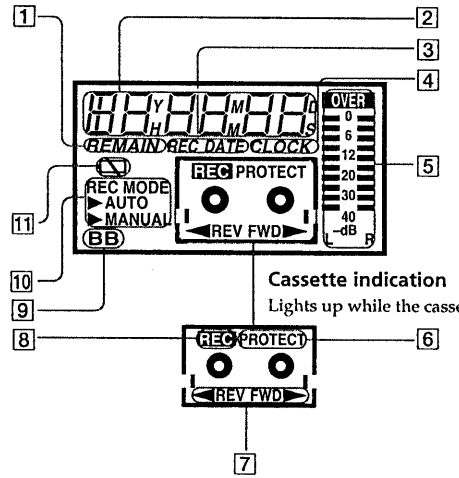
The remote controller



1. ◄► (play/direction) button
2. ■ (stop) button
3. II (pause) button
4. HOLD switch
5. AVLS switch
6. +/– (volume) buttons
7. BB (BASS BOOST) button
8. FF (fast-forward) button
9. REW (rewind) button

→ Looking at the controls

The display window



Cassette indication
Lights up while the cassette is inserted.

1. **REMAIN indication**
   Shows that the remaining time of the tape (of one side) is less than about 4 minutes. (page 14)
2. **Counter**
   Displays the tape counter, the current date and time, and the date and time the recording was made. Also displays the character information such as "PAUSE", etc.
3. **REC DATE (recorded date) indication**
   Lights up along with the date and time the recording was made.
4. **CLOCK indication**
   Lights up along with the time indication.
5. **Level meter**
   Shows the record level while recording, and the playback level while playing.
6. **PROTECT indication**
   Shows the cassette is record-protected. (page 14)
7. **Tape direction indication**
   FWD►(forward), ◄REV (reverse)

5

8 **REC (record) indication**
Lights up while recording.

9 **BB (BASS BOOST) indication**
Lights up when low frequency (bass) sound is emphasized.

10 **REC MODE (recording mode) indication**
Shows the recording level is adjusted automatically ("AUTO") or manually ("MANUAL").

11 **(battery) indication**
Flashes when the dry battery is weak.

What is the NT (Non-Tracking) format?

The NT format is the digital audio tape format which employs stamp-size cassette tapes and is intended as one of the next generation tape recorders. The major benefits of this NT format are:

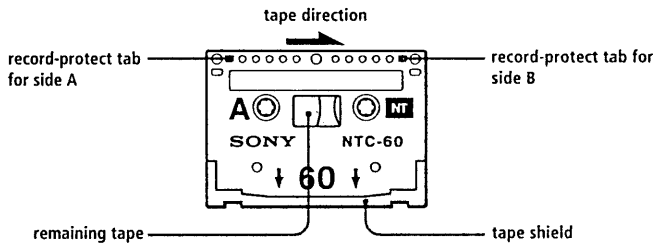
- Pocketable size
- Digital Hi-Fi stereo sound
- Long battery life with one LR6 (size AA) battery
- Easy operation

Stamp-size cassette tapes

The size of the NT cassette made possible a tape recorder small enough to keep in your pocket. Storing cassette tapes is no longer a problem either. Furthermore, you can obtain digital quality recording and playback of up to 2 hours with NTC-120 cassette.

Preparing an NT cassette tape

You can record on and play both sides of the NT cassette tape. The supplied NT cassette tape (NTC-60) offers you 60 minutes of recording and playing (30 minutes on each side).



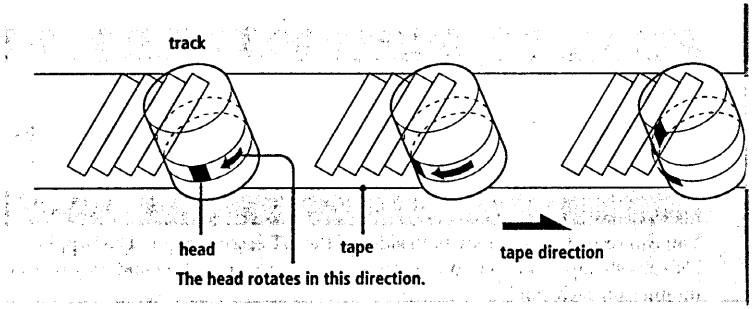
NT cassette tape specifications

Cassette size	30 × 21.5 × 5 mm (w/h/d) (1 3/16 × 7/8 × 7/32 inches)
Mass	2.3 g (0.08 oz)
Tape width	2.5 mm
Material	Metal evaporated tape
Maximum recording time	120 minutes (double side)

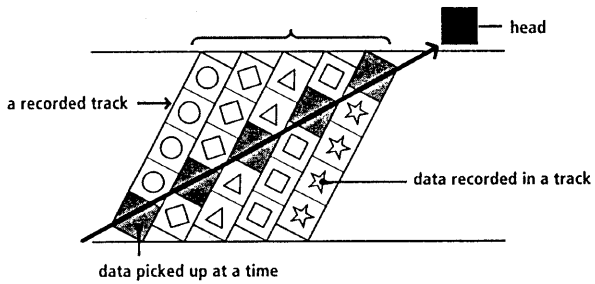
→ What is the NT (Non-Tracking) format?

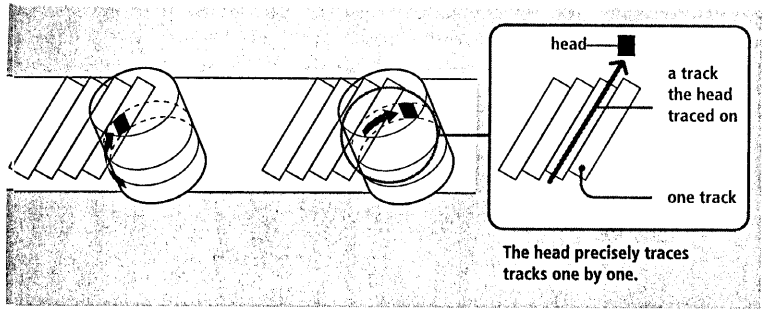
The Non-Tracking format

With the conventional helical scan system of tape tracking, a rotary head must precisely trace each recorded track of the tape during playback. This tracking method requires highly precise mechanical components, which makes it difficult to reduce the size of the recorder.

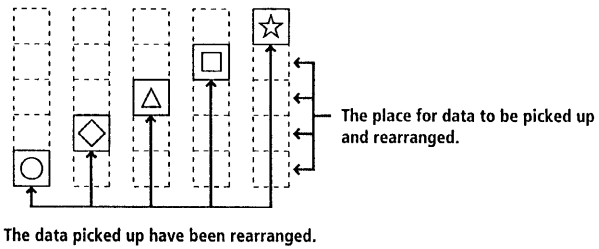


On the other hand, with the NT (Non-Tracking) format, a rotary head is not required to precisely trace the recorded track during playback. Therefore, the number of mechanical parts has been reduced. And this makes the compact size of the recorder possible.
Instead of tracing each track one by one, the rotary head reads several tracks at a time.





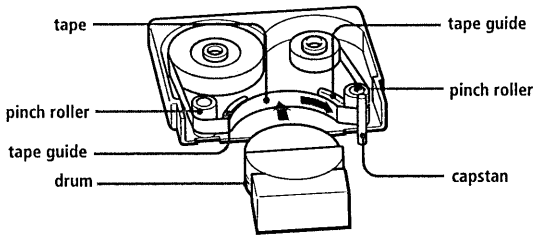
The data picked up may be disconnected or fragmented. However, the IC memory rearranges and augments the data and accurately reproduces the original sound.



→ What is the NT (Non-Tracking) format?

Non-Loading method

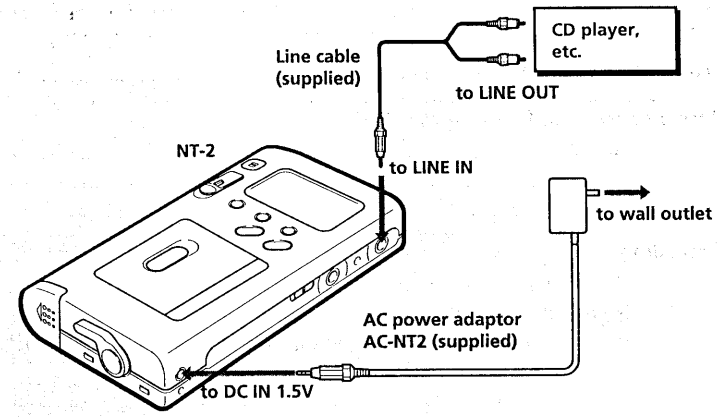
The conventional helical scan system uses a loading mechanism that needs to draw out the tape from a cassette and wrap it around a rotary drum. This loading mechanism increases the complexity of the mechanism in a recorder. On the other hand, with the Non-Loading method, plastic tape guides are molded in an NT cassette to fit a rotary drum in the cassette. The rotary drum is just pushed against the tape guides and the tape wraps around the drum automatically. This method has made a loading mechanism unnecessary.



Memory reverse function

One of the features of this recorder NT-2 is the auto-reverse function. You can record or play both sides of a cassette continuously without turning the cassette over. Moreover, when the continuous recording has been made on both sides (from FWD to REV), you never experience any muting of the playback sound. The buffer memory stores audio data to realize continuous recording/playback on both sides of a cassette tape (memory reverse function).

Connecting to AC power (mains) and a CD player, etc.



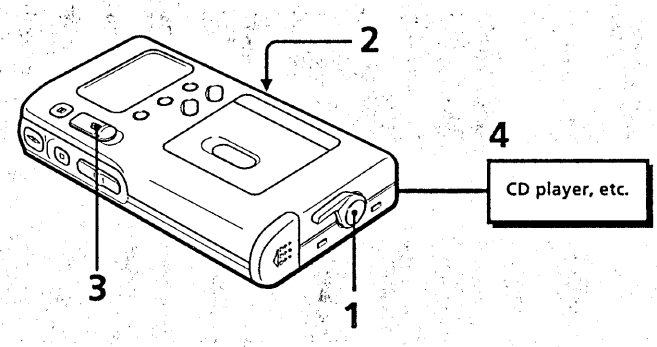
The recorder is operable on AC power (mains) using the AC power adaptor (supplied).

When the sound source has a stereo-mini type LINE OUT jack

Use a line cable RK-G136GS (stereo miniplug ⟷ stereo miniplug, not supplied). For example, portable CD players have this type of LINE OUT jacks.

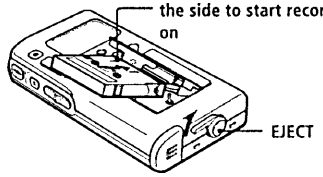
Using on a dry battery → page 7

Recording from a CD, etc.



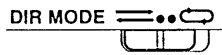
1 **Slide EJECT upward to open the cassette holder and insert the tape.**

Slide in the tape in the direction of the arrow until it clicks.



2 **Select DIR MODE (direction mode).**

⇄: To record on one side facing the cassette holder (FWD)



⇆: To record on both sides (from FWD to REV)

3 **Start recording.**

While pressing the red button, slide it.

4 **Play the CD, etc.**

To stop recording

Press ■.

To suspend recording

Press ❚❚. To resume recording, press ❚❚ again.

To change the recording side

Press ◄► twice and press ■.

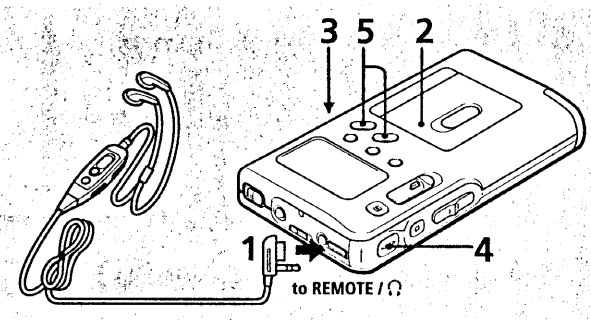
Once you open the cassette holder, the side to start recording will change to the side facing the cassette holder.

To monitor the sound being recorded

Connect the headphones.

Recording with a microphone → page12

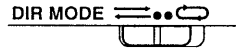
Listening with the headphones



1 **Connect the headphones.**

2 **Insert the tape with the side you want to listen to facing the cassette holder.**

3 **Select DIR MODE (direction mode).**



⇄: To play one side

⇆: To play both sides*

* The recorder plays both sides three times continuously and then automatically stops for protecting the tape.

4 **Play the tape.**

5 **Ajust the volume.**

Operation while playing back

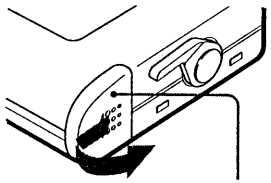
To	Press
stop playing	■
play the opposite side of a tape	◄►
suspend playback	❚❚
fast-forward	■ (stop) and then FF
rewind	■ (stop) and then REW

Listening with a stereo system → page 18

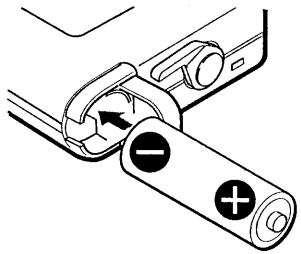
Using on a dry battery

Install an LR6 (size AA) alkaline battery.

1 **Open the battery compartment lid.**
While pressing the lid, slide it in the direction of the arrow.



2 **Insert the battery with the – side first.**



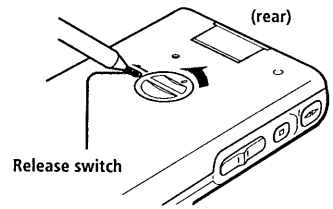
When the battery becomes weak
The ⌫ indication flashes in the display. Replace the battery with a new one, otherwise the battery will go dead and you cannot operate this unit.

Battery life
You can record continuously with a new alkaline battery for about 6 hours, or play back for about 4.5 hours.

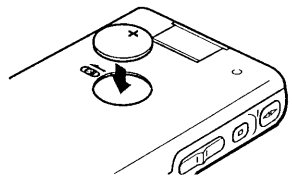
Installing a lithium battery

To operate the built-in clock, install the lithium battery (CR1220, supplied).

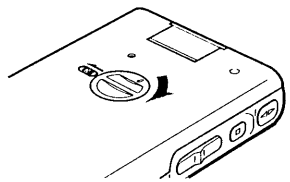
1 **While sliding the release switch with a pointed object, rotate the lid in the direction of OPEN.**
The lid is removed.



2 **Install a lithium battery with the + side facing up.**



3 **Replace the lid, and rotate it in the direction of CLOSE until it clicks.**



Lithium battery life

Replace the lithium battery once about a year. When the battery becomes weak, the date and time display may flash or the clock may lose time. Note that the built-in clock normally loses about 2 minutes a month.
Replace the battery only with one of the same type and rating.

After replacing the lithium battery

If necessary, reset the clock (page 10). If you use the recorder without resetting the clock, the correct date and time will not be recorded with the recording.

Notes on lithium battery

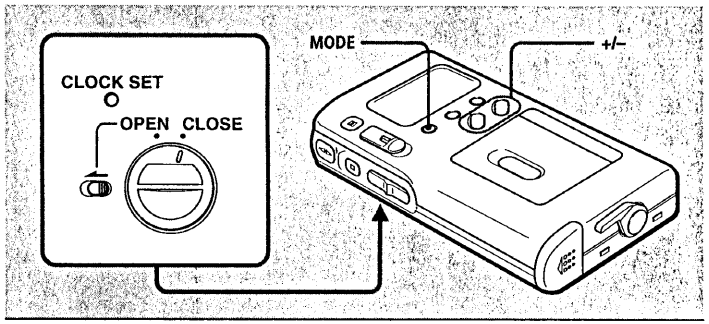
- Keep the lithium battery and the recorder out of the reach of children. Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, as a short-circuit may occur.

WARNING

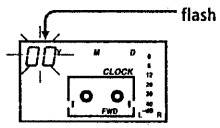
Battery may explode if mistreated.
Do not recharge, disassemble or dispose of in fire.

Setting the clock

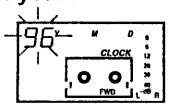
Set the clock before starting any recording operations to stamp the date and time.
After connecting to the power source, set the year (Y), month (M), date (D), hour (H), minute (M) in this order. To go to the next step, press MODE. To enter the digits, press + or –.



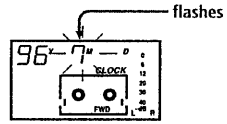
1 While the recorder is not operating, press CLOCK SET for about one second with a pointed object.
The digits of the year flash.



2 Press + or – to enter the current year .
To change the digits rapidly, keep pressing + or –.



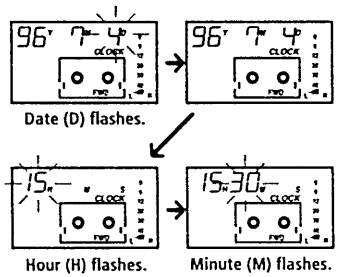
3 Press MODE.
The year you set is stored in the memory and the digit of the month starts flashing.



4 **Repeat steps 2 and 3 to set the month, date, hour, and minute.**

The display changes as illustrated.

The time is displayed in the 24-hour system.



5 **After setting the minute, press MODE.**

The clock starts operating, and the current time (hour, minute, and second) is displayed.

To set the time precisely, press MODE at the same time as a time signal.

If you make a mistake while setting the clock

Press CLOCK SET to release the setting mode, and start setting the clock again from step 2. You can skip the correct digits by pressing MODE and go on to the digits you want to reset.

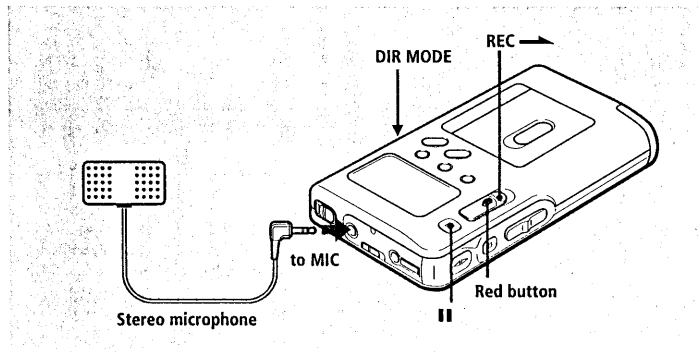
If the clock loses time

Adjust the clock again according to the steps above.

We recommend you to adjust the clock periodically to stamp the accurate date and time.

Recording with a microphone

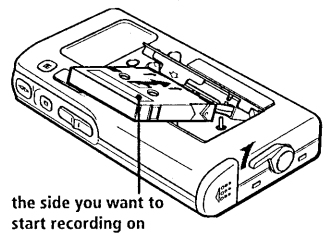
Make a recording using the stereo michrophone (supplied).



1 **Connect the stereo microphone (supplied) to MIC.**

2 **Slide EJECT upward to open the cassette holder and insert the tape.**

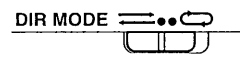
Slide in the tape in the direction of the arrow until it clicks.



3 **Select DIR MODE (direction mode).**

⇄ : To record on one side facing the cassette holder (FWD)

⇆ : To record on both sides (from FWD to REV)



4 While pressing the red button on REC, slide REC.
Recording starts.
This unit adjust the recording level automatically.

To stop recording
Press ■.

To suspend recording
Press ❚❚. "PAUSE" and the tape counter appear in the display alternately. To resume recording, press ❚❚ again.

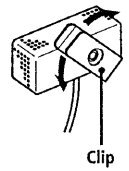
To adjust the recording level
Recording level adjustment mode has been preset to SPEECH. To change the mode to MUSIC or adjust the recording level manually, refer to "Adjusting the recording level" (page 15).

To start recording quickly
After finishing step 3, slide REC while pressing the red button after pressing ❚❚. The recorder enters recording standby mode. When you want to start recording, press ❚❚.

When you set DIR MODE (direction mode) to ⇆ (both sides)
You can play the tape recorded with the NT-2 smoothly without a break when the tape changes from the FWD (forward) side to the REV (reverse) side ("Memory reverse function", page 34). If you start recording less than 10 minutes before the end of the FWD side, "memory reverse" may not function.

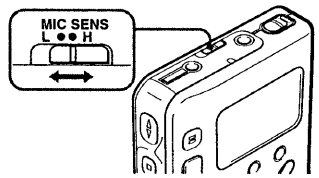
→ Recording with a microphone

Using the stereo microphone (supplied)
You can attach the microphone to your clothing (for example, your tie or collar). The clip rotates as illustrated.



To adjust the sensitivity of the microphone
Set the MIC SENS switch to H (high) or L (low) according to the recording condition while monitoring with the headphone.

H: To record a remote or quiet sound
L: To record a close or loud sound



When the following indications flash "REC" and "PROTECT"
The cassette is record-protected. Release the record-protect or insert a new cassette. (pages 25, 31)

"REC" "PROTECT" and "◄ REV"
The REV side of the cassette is record-protected.

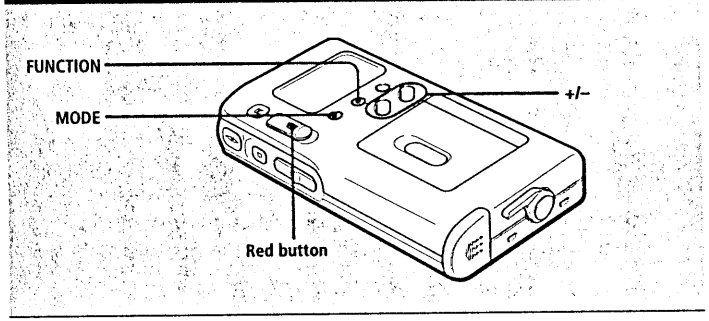
"REMAIN"
The remaining time of the tape (of one side) is less than about 4 minutes. In this case, you cannot change the DIR MODE (direction mode).

To mix sound from two audio sources
Connect the microphone to the MIC jack and connect another piece of audio equipment to the LINE IN jack of the recorder. You can record the sound from both sources mixed together. In this case you cannot adjust the sound balance.

Adjusting the recording level

Sound levels of the source are automatically adjusted when recorded on the tape. You can select the automatic adjustment mode according to the sound source.
If you want to control the recording level more precisely, you can adjust the level manually.

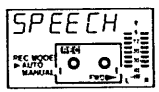
Selecting the automatic adjustment mode



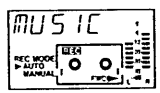
1 **Press FUNCTION in recording or recording stanby mode.**
In other modes, press FUNCTION while pressing the red button.

2 **Press MODE repeatedly to select SPEECH or MUSIC.**
Each time you press MODE, recording level adjustment mode changes as follows:

→ SPEECH → MUSIC → MANUAL →



SPEECH: To record conversation, etc.
MUSIC: To record music



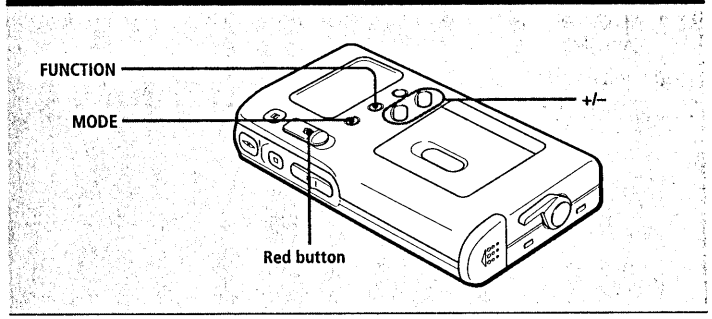
3 **Press FUNCTION.**
Recording level will be adjusted automatically.

Note

Due to the kind of the source or changes in the sound level, automatic adjustment may not control the recording level precisely or noise may occur. In these cases, control the recording level manually. (page 16)
The recorder memorizes the recording level adjustment mode even after recording.

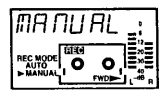
→ Adjusting the recording level

Adjusting the recording level manually (Manual recording)



1 **Press FUNCTION in recording or recording stanby mode.**
In other modes, press FUNCTION while pressing the red button.

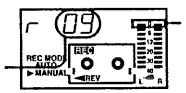
2 **Press MODE repeatedly to select MANUAL.**



3 **Press FUNCTION.**
The recording level control is switched to manual control.

4 **While pressing the red button, press + or – to adjust the level.**

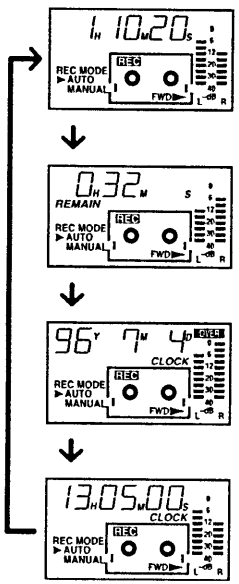
As the digits increase, the level increases (minimum: 0, maximum: 30).



Adjust the level so that the top bar lights once in a while.

Displays while recording

Each time you press the MODE button while recording, while in the standby mode, or right after the recorder has stopped recording, the display changes as follows:



Tape counter
Counted length of the tape, not elapsed time.

Remaining time
This shows you can record for 32 more minutes.

Year, month, and date
This shows today is July 4, 1996.

Hour, minute, and second
This shows it is just 1:05 pm now. (The clock operates in 24-hour system.)

Remaining time display

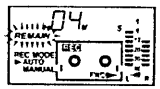
Playback mode determines how the remaining time is counted. It takes about 10 seconds after recording has started untill the remaining time is displayed.
The displayed remaining time may differ a little from the actual time.

To reset the tape counter

Press the COUNTER RESET button while the tape counter appears. The tape counter indicates "0H00M00S".

When "REMAIN" flashes in the display

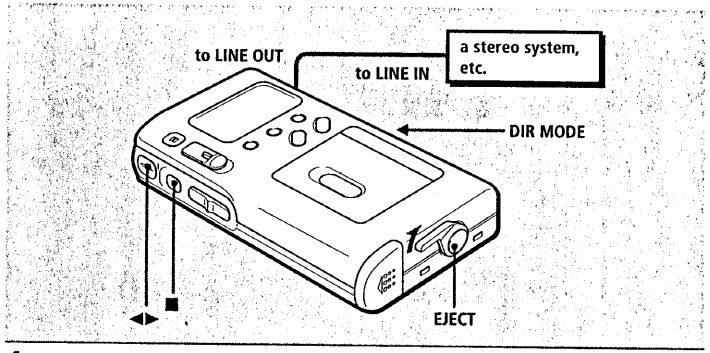
The remaining time of the tape is less than about 4 minutes.



When "REMAIN" flashes in the display, you cannot change DIR MODE (direction mode).

Listening with a stereo system

Connect another piece of audio equipment such as a stereo system.



1 **Connect the line cable (supplied) to the LINE OUT jack of the recorder, and then connect the other side of the cable to the LINE IN jack of your stereo system.**

2 **Insert the tape with the side you want to listen to facing the cassette holder.**

3 **Select DIR MODE (direction mode).**
⇉ : To play only one side.
⇄ : To play both sides continuously*.
* The recorder plays three times continuously and then automatically stops for protecting the tape.

4 **Press ◀▶.**
Playback starts.

5 **Adjust the volume on the stereo system.**

Note

- If you connect the line cable to your stereo system before connecting it to the recorder, noise may be heard.
- While the headphones are connected to the recorder, the playback volume from the headphones may be lowered if you connect a stereo system to the recorder.

Operation while playing back

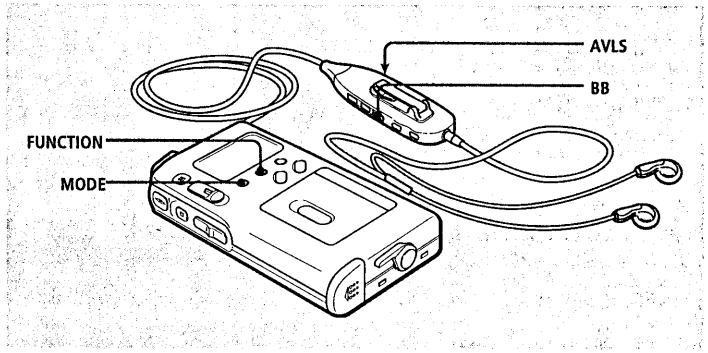
To	Press
stop playing	■
play the opposite side of a tape	◀▶
suspend playback	II
fast-forward	■ (stop) and then FF.
rewind	■ (stop) and then REW.

To listen to a tape in a car

Use the car battery cord DCC-E215HG or DCC-E215 (not supplied) and the car connecting pack CPA-8 (not supplied). Connect the DC IN 1.5V jack of the recorder to the cigarette lighter socket of the car with the car battery cord. And connect the LINE OUT jack of the recorder to the cassette car stereo with the car connecting pack.

Using the playback features

When listening with the headphones, you can select the sound quality.



Emphasizing the bass (BASS BOOST feature)

The BASS BOOST feature intensifies low frequency sound for richer bass reproduction.

1 **Press FUNCTION.**

2 **Press MODE to select BASS 1 or BASS 2.**
Each time you press MODE, the setting changes as follows:
"OFF" →"BASS 1"→"BASS 2"
BASS 1: slight emphasis of the bass
BASS 2: strong emphasis of the bass

3 **Press FUNCTION to end selection.**

To select with the remote controller

Press the BB button.
Each time you press the button, the selection changes: "OFF"→"BASS 1" →"BASS 2".

Note
When you connect any cord to the LINE OUT jack, the BASS BOOST does not work.

Protecting your hearing (AVLS)

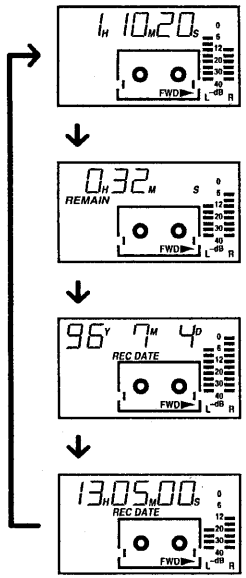
The AVLS (Automatic Volume Limiter System) function allows you to limit the maximum volume of the recorder to protect your ears.

Slide AVLS on the remote controller to ON.

The volume does not exceed over "P 23" (maximum "P 30") when using AVLS function, even if you attempt to turn the volume up higher.

Displays while playing

The recording time and date stamped on the tape is displayed during playback. Each time you press the MODE button, the display changes as follows:



Tape counter
Counted length of the tape, not elapsed time

Remaining time
This shows you can play for 32 more minutes.

Year, month, and date recorded
This shows the recording was made on July 4, 1996.

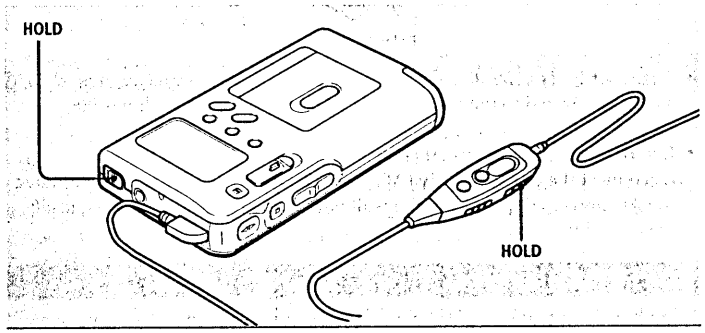
Hour, minute, and second recorded
This shows the recording was made at just 1:05 pm.

To reset the tape counter

Press the COUNTER RESET button while the tape counter appears. The tape counter indicates "0H00M00S".

Locking the controls (Hold function)

To prevent the buttons from being accidentally operated, use the Hold function.
It can lock the controls while you are walking with the recorder in your bag or pocket. Even when this function is activated, you can still reset the tape counter and change the display.

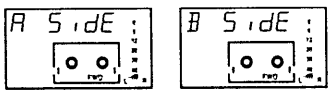


Slide HOLD in the direction of the arrow.
The HOLD switch on the recorder works to lock the controls on the recorder. The HOLD switch on the remote controller works to lock the controls on the remote controller.
To release the Hold function, slide back HOLD in the opposite direction of the arrow.

Knowing the side of a tape (A/B side checking function)

Before starting operation, you can check which side of the tape in the recorder is to be played or recorded.

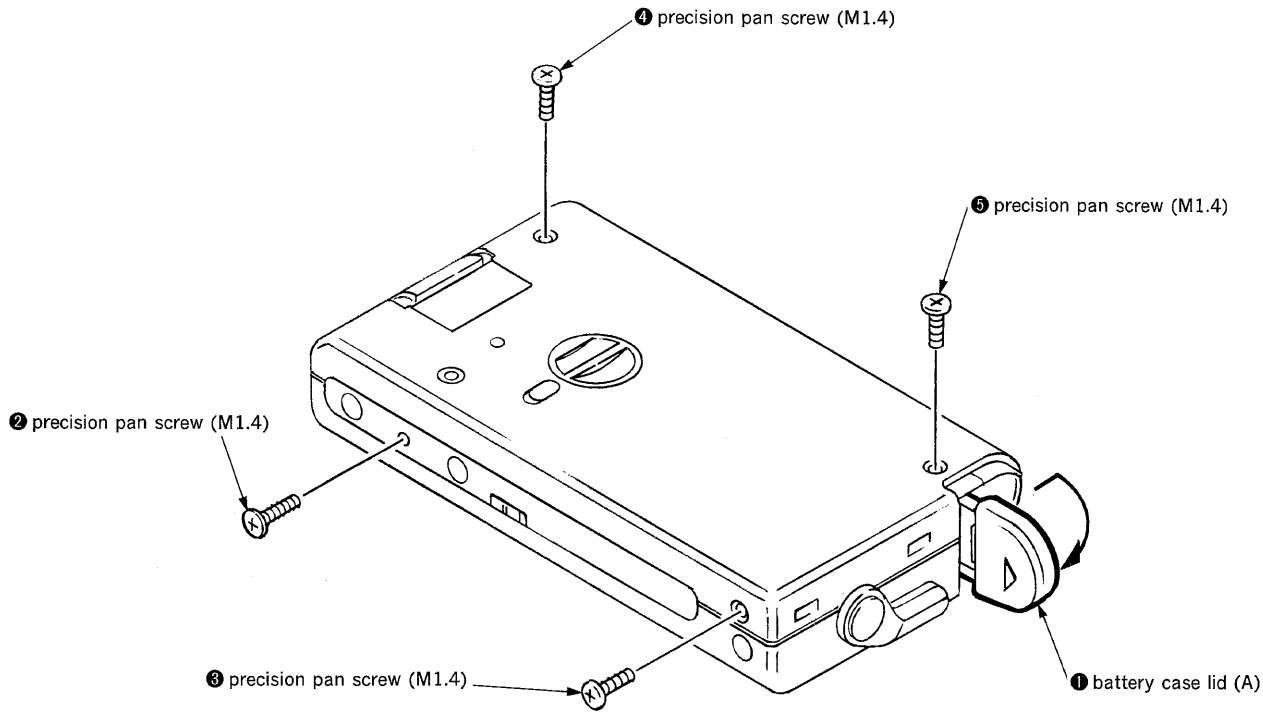
While the recorder is not operating, press ■ for a while.
" A Side" or "B Side" appears in the display.

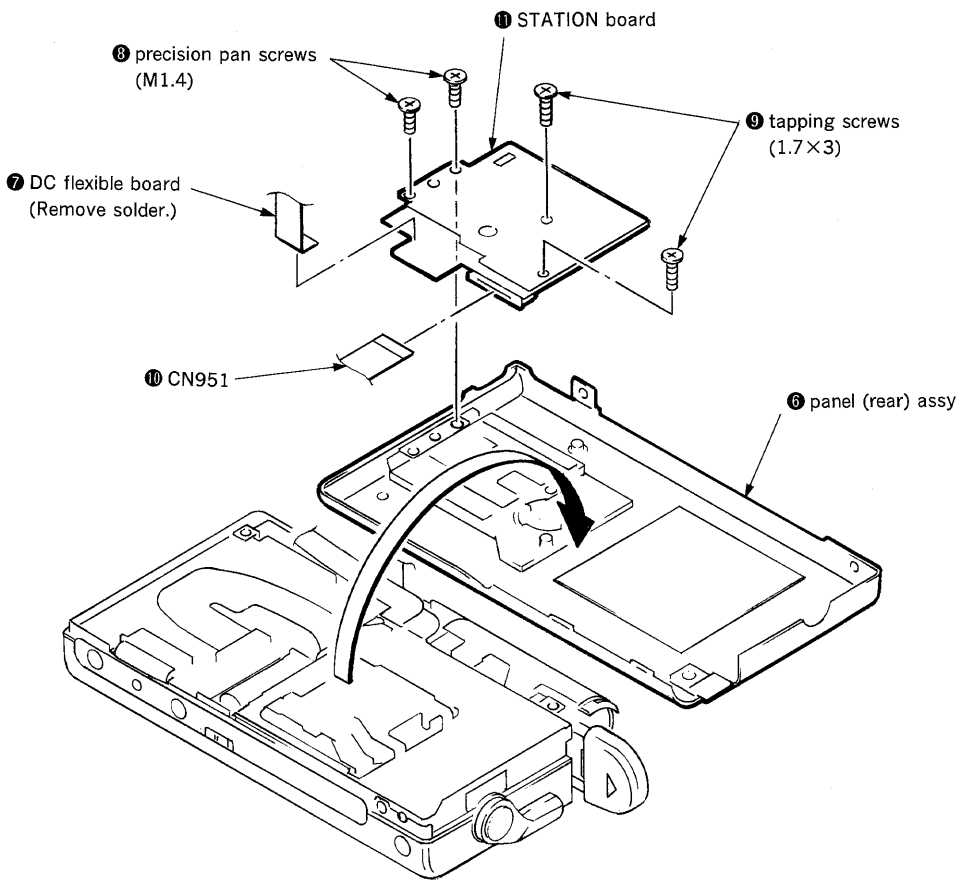


SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

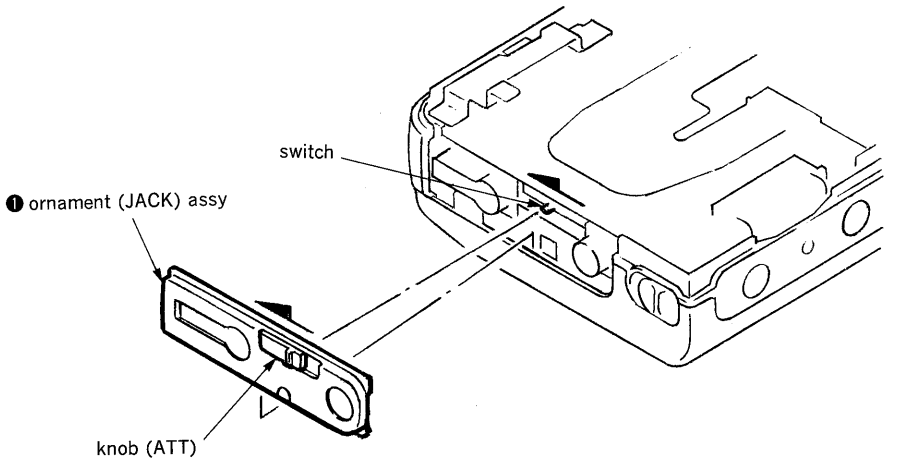
2-1. PANEL (REAR) ASSY


❹ precision pan screw (M1.4)
❺ precision pan screw (M1.4)
❷ precision pan screw (M1.4)
❸ precision pan screw (M1.4)
❶ battery case lid (A)

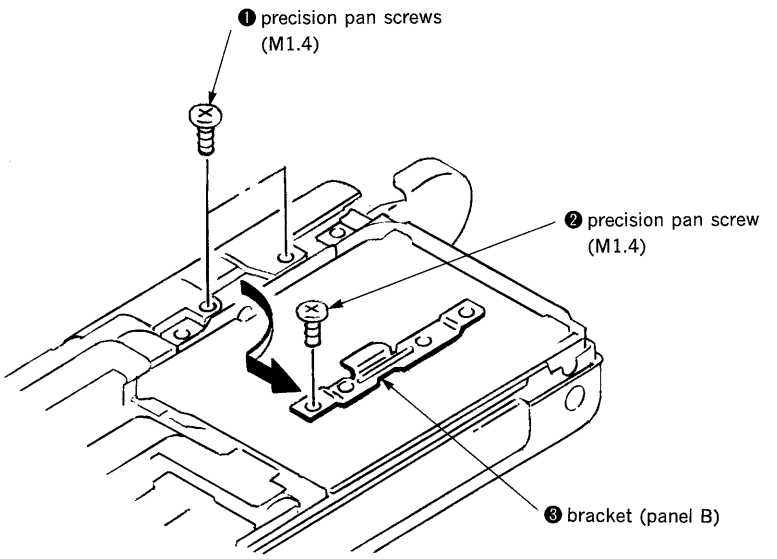

⓫ STATION board
❽ precision pan screws (M1.4)
❾ tapping screws (1.7×3)
❼ DC flexible board (Remove solder.)
❿ CN951
❻ panel (rear) assy

2-2. ORNAMENT (JACK) ASSY

Note : When installing, slide the switch and the knob (ATT) in the arrow direction and position them.

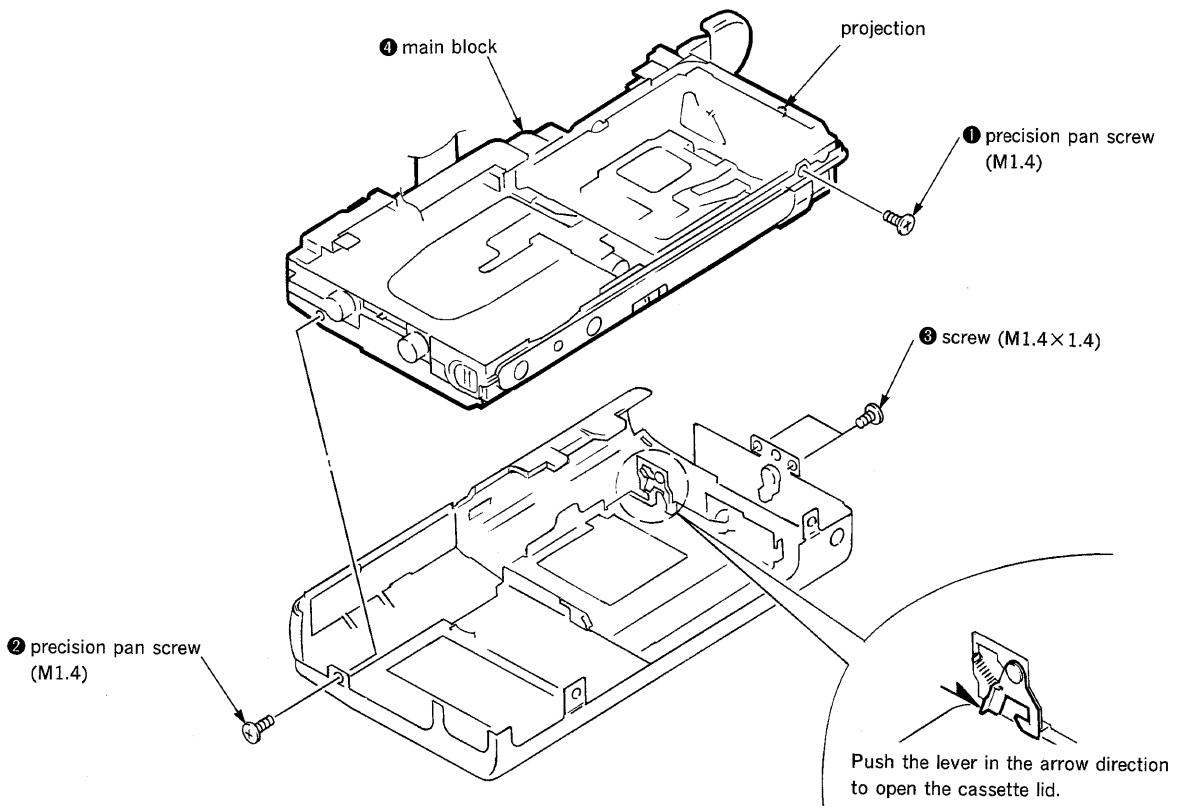


2-3. BRACKET (PANEL B)



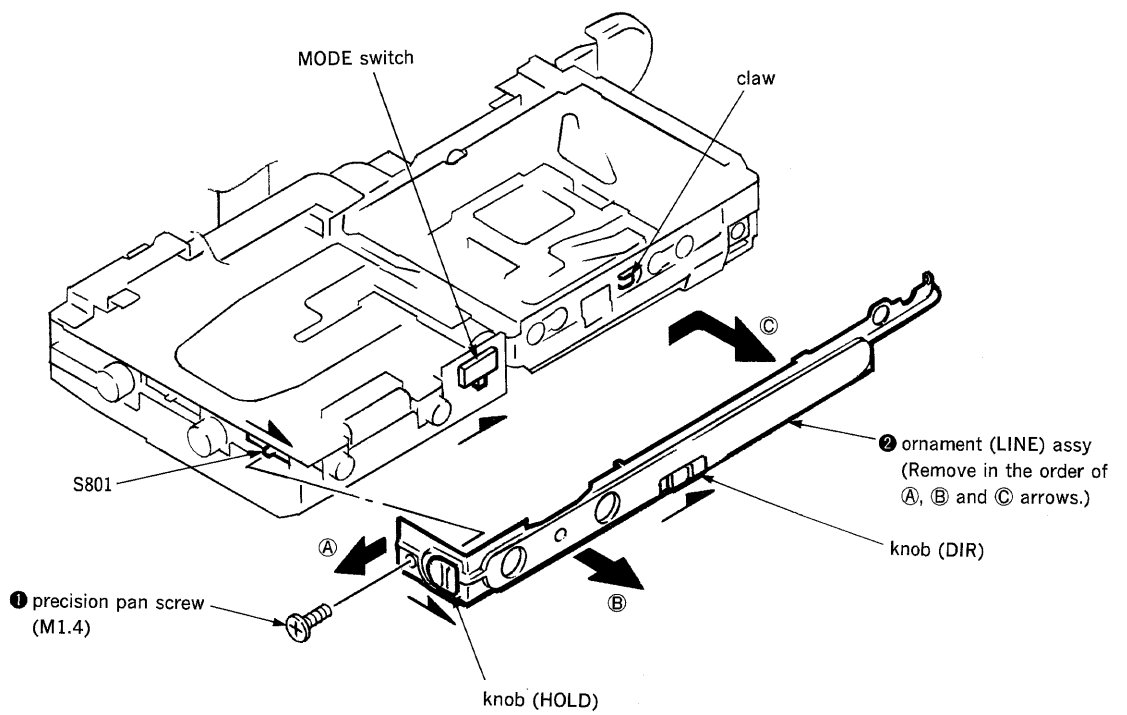
2-4. MAIN BLOCK

Note : Open the cassette cover before installing.
(See the supplementary figure.)

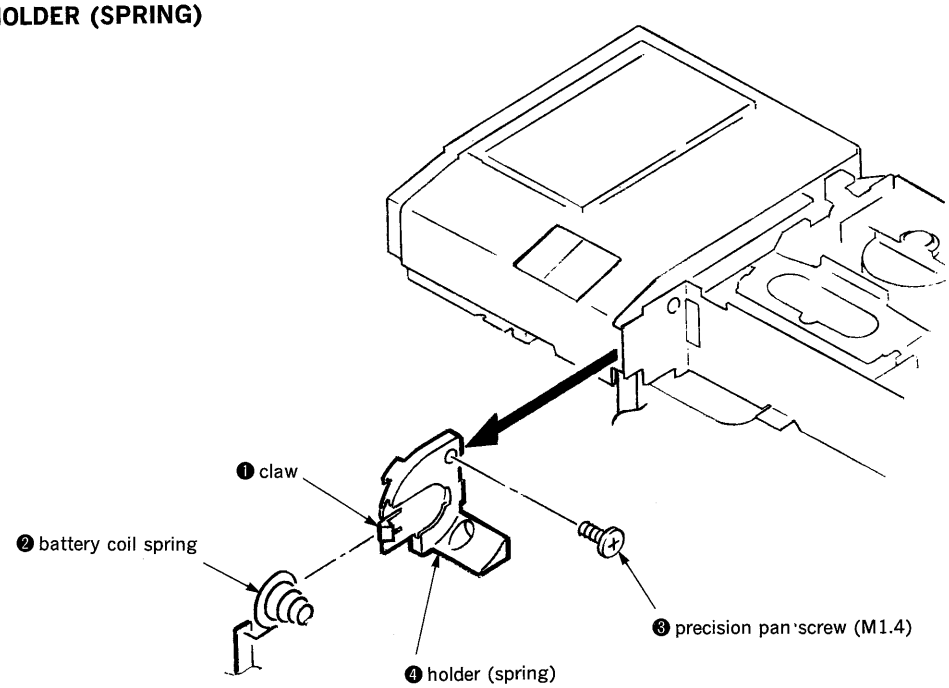

❹ main block
projection
❶ precision pan screw (M1.4)
❸ screw (M1.4×1.4)
❷ precision pan screw (M1.4)
Push the lever in the arrow direction to open the cassette lid.

2-5. ORNAMENT (LINE) ASSY

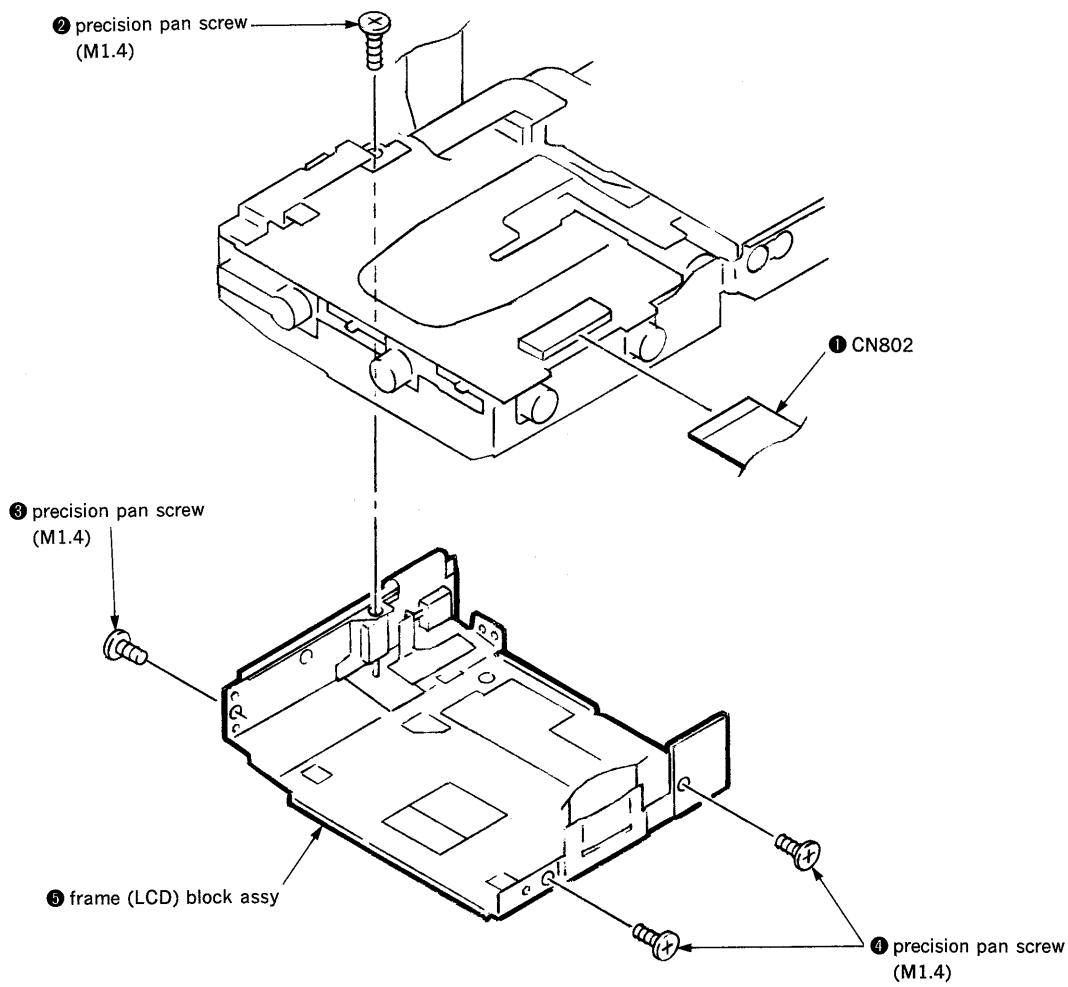
Note : When installing, as directed by respective arrows, slide S801 and knob (HOLD) and slide MODE switch and knob (DIR) and position them.



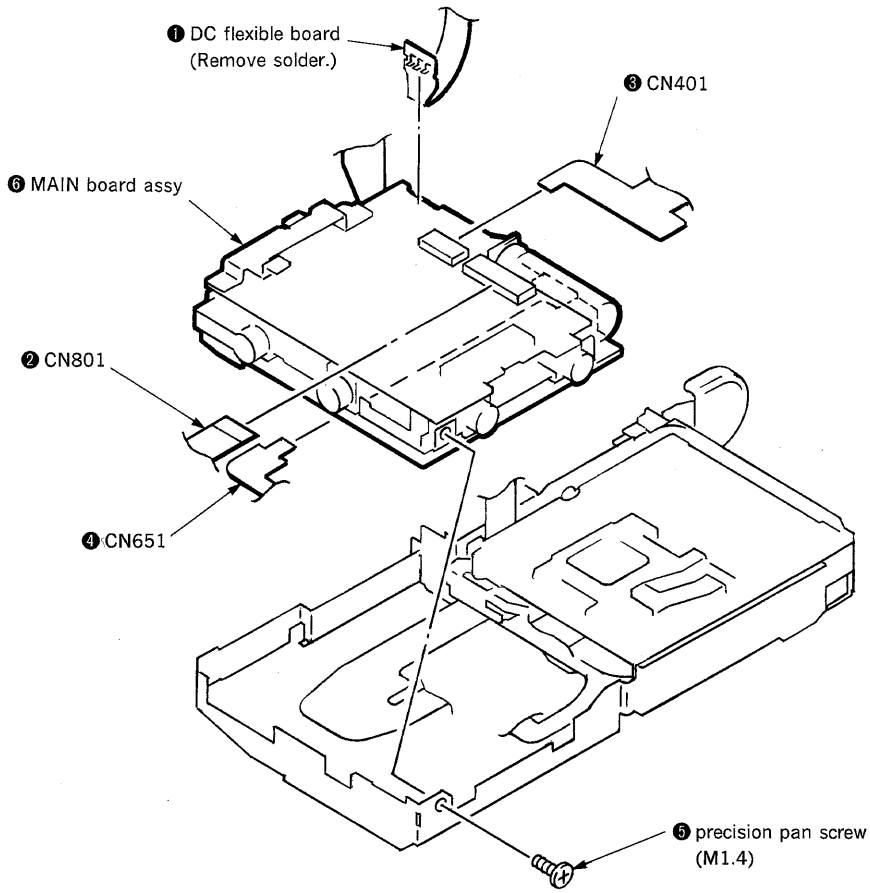
2-6. HOLDER (SPRING)



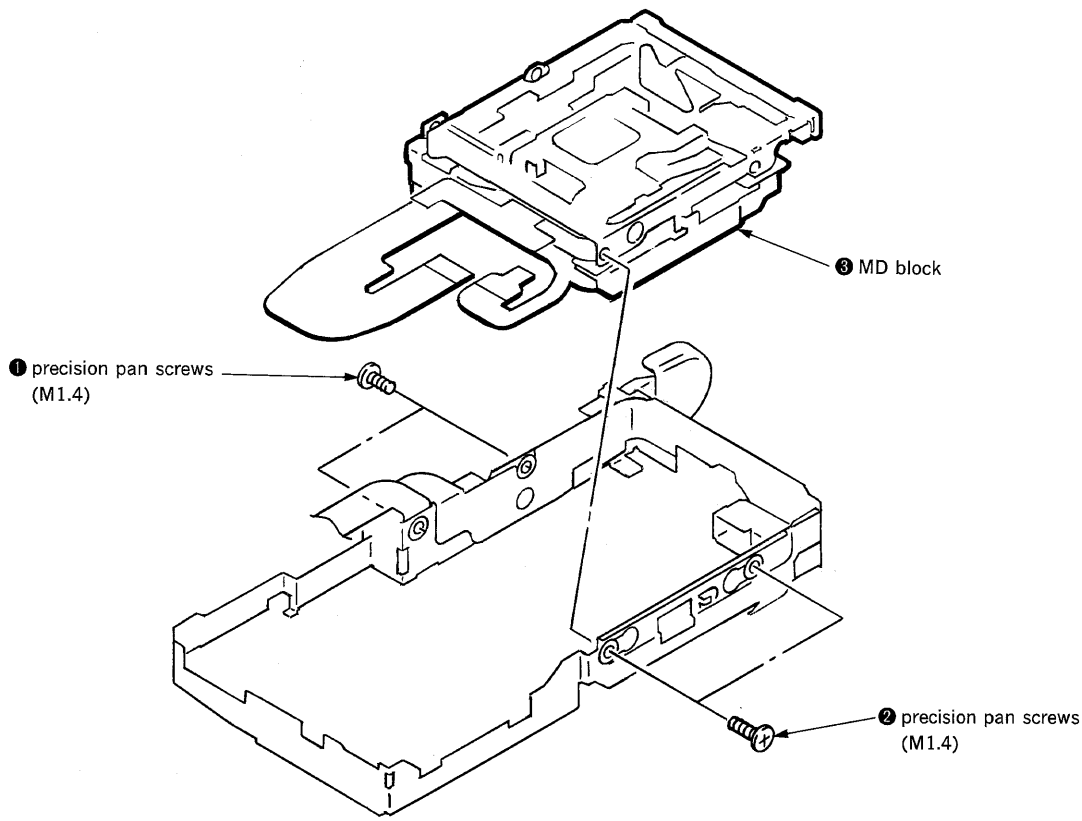
2-7. FRAME (LCD) BLOCK ASSY



2-8. MAIN BOARD ASSY



2-9. MD BLOCK



SECTION 3
DIAGRAMS

3-1. IC PIN DESCRIPTIONS

• IC751 CXD8494Q-B (MAIN SIGNAL PROCESSOR)

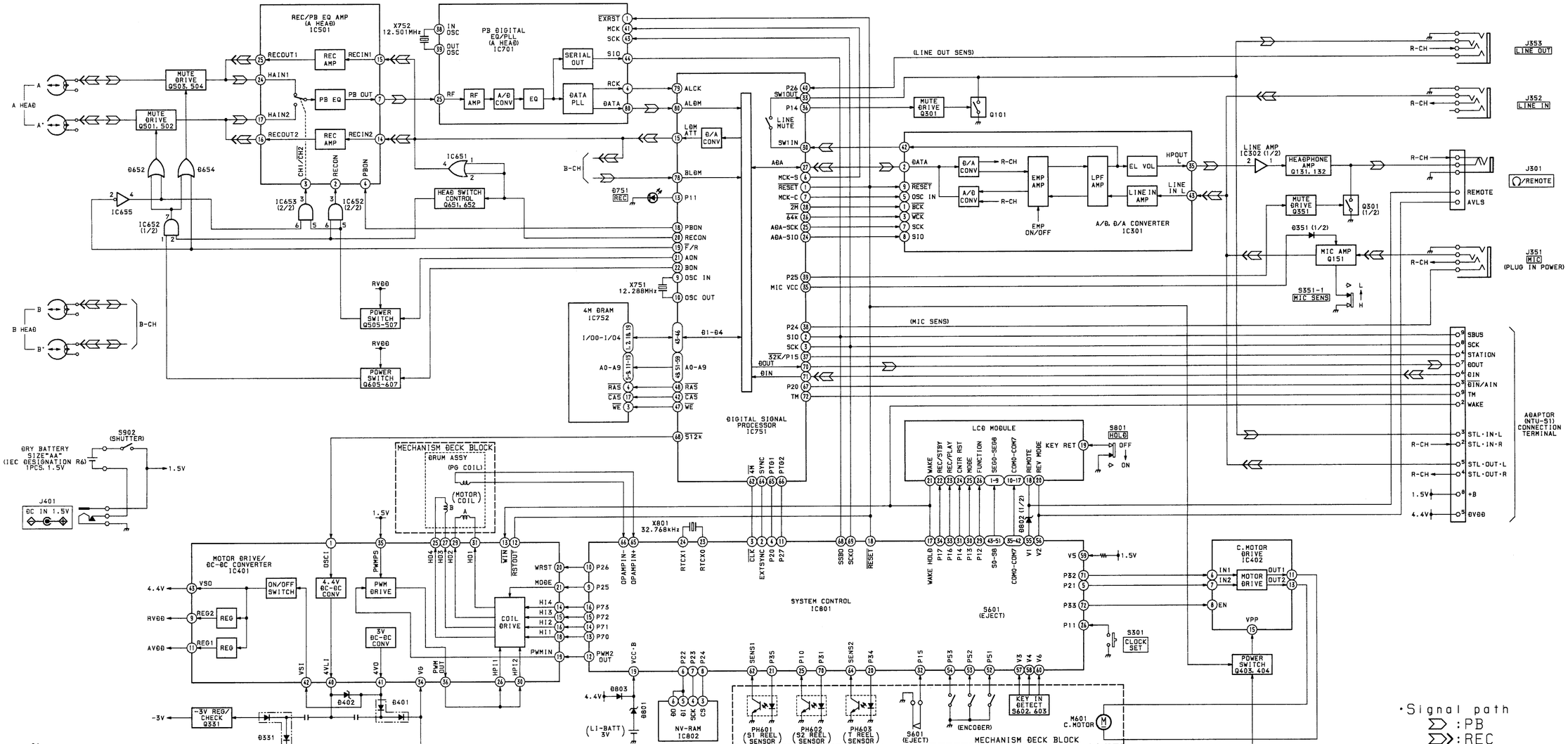
Pin No.	Pin Name	I/O	Pin Description
1	$\overline{\text{RESET}}$	I	Hardware reset input
2	SIO	I/O	CPU interface data input/output terminal
3	SCK	I/O	CPU interface clock input/output terminal 16 or more clock pulses are applied from the START bit. The output clock is generated by PLL at the edge of START bit of SIO.
4	$\overline{\text{SCK}} \cdot \overline{\text{OE}}$	I/O	SCK terminal output enable signal. "H" for input.
5	$\overline{\text{MCKC}} \cdot \overline{\text{OE}}$	I/O	MCK-C terminal output enable signal. "H" for input. Not used in this set.
6	MCK-S/P10	I/O	SEP block master clock (12.288MHz) input/output terminal
7	MCK-C	I/O	CODEC and D-FIL master clock (12.288MHz) input/output terminal
8	D • VSS-E	—	Digital ground for external terminal input/output buffer.
9	OSC-IN	I	Crystal oscillator input terminal which is connected with 12.288MHz X'tal.
10	OSC-OUT	O	Crystal oscillator output terminal which is connected with 12.288MHz X'tal.
11	D • VDD-E	—	Digital power for external input/output buffer.
12	R • LDM • OUT/P37	I/O	Terminal to output LDM signal at logic level in REC mode. Not used in this set.
13	R • LDM • IN/P11	I/O	Input terminal to supply external signal to LDM attenuator.
14	R • VDD	—	Analog power for LDM attenuator.
15	LDM-ATT	O	LDM attenuator signal output in REC mode.
16	LDM-COM	O	LDM attenuator signal return in REC mode.
17	R-VSS	—	Analog ground for LDM attenuator.
18	PBON	I/O	PTG output
19	$\overline{\text{F}}$/R	I/O	PTG output. Can be negative-phased to $\overline{\text{F}}$/R in the IC.
20	RECON	O	PTG output
21	AON	O	PTG output
22	BON	O	PTG output
23	D • VSS-I	—	Digital ground for internal logic.
24	ADA-SIO	O	Terminal for generating the SIO signal to control ADA-IC.
25	ADA-SCK	O	Terminal for generating the SCK signal to control ADA-IC.
26	$\overline{\text{64K}}$	O	64kHz output which falls at the boundary of V.
27	ADA	I/O	Terminal to connect with AD/DA converter. MSB 1st
28	$\overline{\text{2M}}$	O	2MHz output which falls at the boundary of V.
29	A • VDD	—	Analog power for analog switch and MIC VCC.
30	SW • 1 • IN	I/O	LINE OUT MUTE analog switch channel 1 input/output
31	SW • 2 • IN	I/O	LINE OUT MUTE analog switch channel 2 input/output
32	A • VSS	—	Analog around for analog switch and MIC VCC.
33	SW • 1 • OUT	I/O	LINE OUT MUTE analog switch channel 1 output/input
34	SW • 2 • OUT	I/O	LINE OUT MUTE analog switch channel 2 output/input
35	MIC • VCC	O	Power switch output for MIC-AMP.
36	P14	I/O	Used for port only.
37	$\overline{\text{32K}}$/P15	I/O	32kHz output which falls at the boundary of V. Not used in this set.
38—40	P24—P26	I/O	Used for port only.
41	D • VDD-D	—	Digital power for DRAM terminal input/output buffer.
42	$\overline{\text{CAS}}$	O	Connected with $\overline{\text{CAS}}$ of DRAM.
43—46	D3, D4, D1, D2	I/O	Connected with any DATA of DRAM.
47	$\overline{\text{WE}}$	O	Connected with $\overline{\text{WE}}$ of DRAM.
48	$\overline{\text{RAS}}$	O	Connected with $\overline{\text{RAS}}$ of DRAM.
49	A9	O	Connected with any ADRS of DRAM. Only valid for 4×1M-bits.
50	D • VSS-D	—	Digital ground for DRAM terminal input/output buffer.

Pin No.	Pin Name	I/O	Pin Description
51—59	A8—A0	O	Connected with any ADRS of DRAM.
60	D • VDD-D	—	Digital power for DRAM terminal input/output buffer.
61	D • VSS-I	—	Digital ground for internal logic.
62	$\overline{4M}$	I/O	4MHz input/output which falls at the boundary of V. This signal is issued on RESET.
63	$\overline{4M}$ • $\overline{OE}$	I/O	$\overline{4M}$ terminal output enable signal. "L" for output. Not used in this set.
64	SYNC	I	V synchronizing signal. One clock of $\overline{4M}$ is applied just before the boundary of V.
65, 66	PTG1, PTG2	I/O	PTG output
67	TEST/P20	I/O	LSI test signal input/output terminal
68	$\overline{512K}$	I/O	512kHz output which falls at the boundary of V. Open at standby.
69	D • VDD-I	—	Digital power for internal logic.
70	DOUT/$\overline{32K}$	I/O	Standard D • OUT output. $\overline{32K}$ output
71	DIN/DUB	I/O	Standard D • IN input. Input/output of DUB signal (LSB 1st).
72	TM	I/O	Trace monitor output terminal
73—76	S0—S3	I/O	SIO device code setting input/output terminals (S3—S0).
77	B • LCK	I	LCK input on B channel. When the EXCLUSIVE OR of this signal and MCK-S is 1, an internal clock is regarded as present, making the LMD valid.
78	B • LDM	I	Input of LDM signal for playback on B channel.
79	A • LCK	I	LCK input on A channel. When the EXCLUSIVE OR of this signal and MCK-S is 1, an internal clock is regarded as present, making the LMD valid.
80	A • LDM	I	Input of LDM signal for playback on A channel.

• IC801 LZ8514 (LCD KEY SYSTEM CONTROL/SERVO)

Pin No.	Pin Name	I/O	Pin Description
1	VCC	—	System power
2	EXTSYNC	I/O	V SYNC signal input
3	$\overline{CLK}$	I	Clock input
4—11	PORT20—PORT27	I/O	Port2 input/output
12	PWM2OUT	O	PWM2 output
13	MC0/P70	I/O	MC signal (input)
14	MC1/P71	I/O	MC signal (input)
15	MC2/P72	O	MC signal (output)
16	MC3/P73	O	MC signal (output)
17	WAKEHOLD	O	Power wake-up signal output
18	$\overline{RESET}$	I	Reset input
19	VCC • B	—	Power for RTC and RAM.
20, 21	PORT34, PORT35	I/O	Port3 input/output
22	ALARM	O	Alarm output. Not used in this set.
23	RTCX0	I	RTC clock input
24	RTCX1	O	RTC clock output
25, 26	PORT10, PORT11	I	Port1 input
27	GND	—	Ground
28	TEST	I	Test input
29—34	PORT12—PORT17	I	Port1 input
35—42	COM0/P60—COM7/P67	I/O	LCD common signal input/output
43—50	S0/P40—S7/P47	I/O	LCD segment signal input/output
51—54	S8/P50—S11/P53	I/O	LCD segment signal input/output
55—59	V1—V5	I	Analog input
60	V6	I/O	Analog input/output
61	VP	I	External pull-up terminal
62	SENS1	I	Sensor input 1
63	GND	—	Ground
64	SENS2	I	Sensor input 2
65	OPAMPIN+	I	Ope amplifier input
66	OPAMPIN−	I	Ope amplifier input
67	OPAMPOUT	O	Ope amplifier output. Not used in this set.
68	SSB0	I/O	SSB0 input/output
69	SCK0/P30	I/O	SCK0 input/output
70	SSB1/P31	I/O	SSB1 input/output
71	SCK1/P32	I/O	SCK1 input/output
72	PWM1/P33	I/O	PWM1 input/output

3-2. BLOCK DIAGRAM

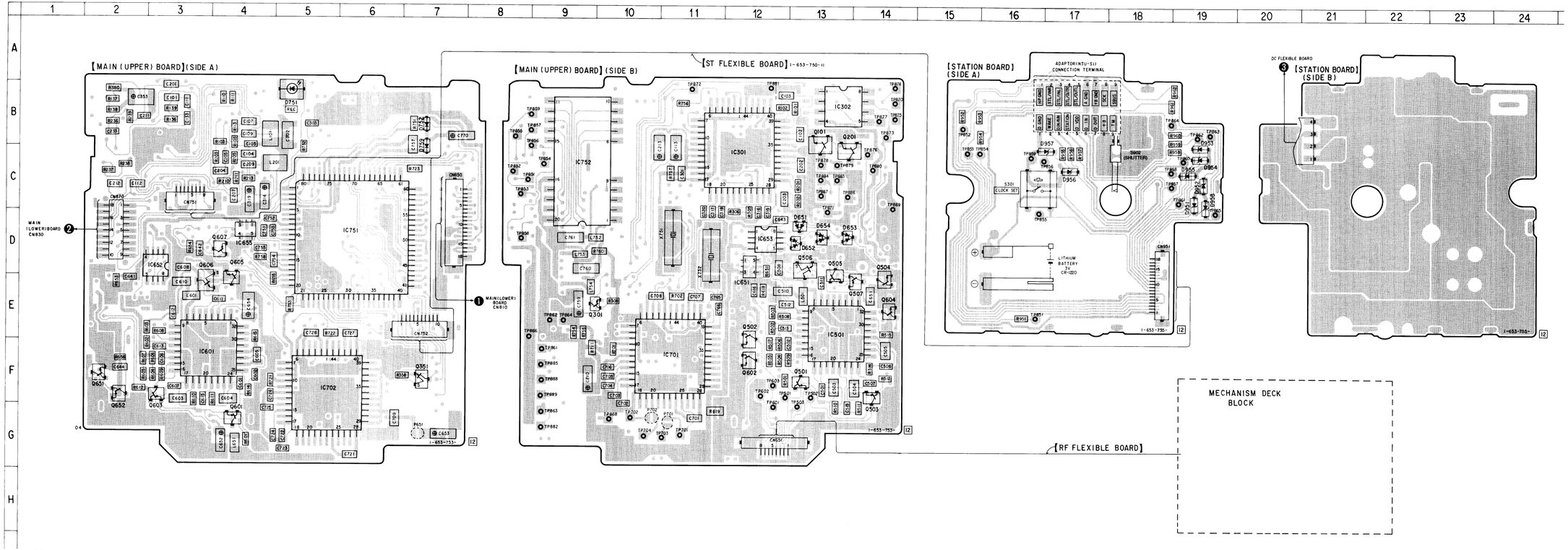


3-3. PRINTED WIRING BOARDS—MAIN (UPPER) SECTION—

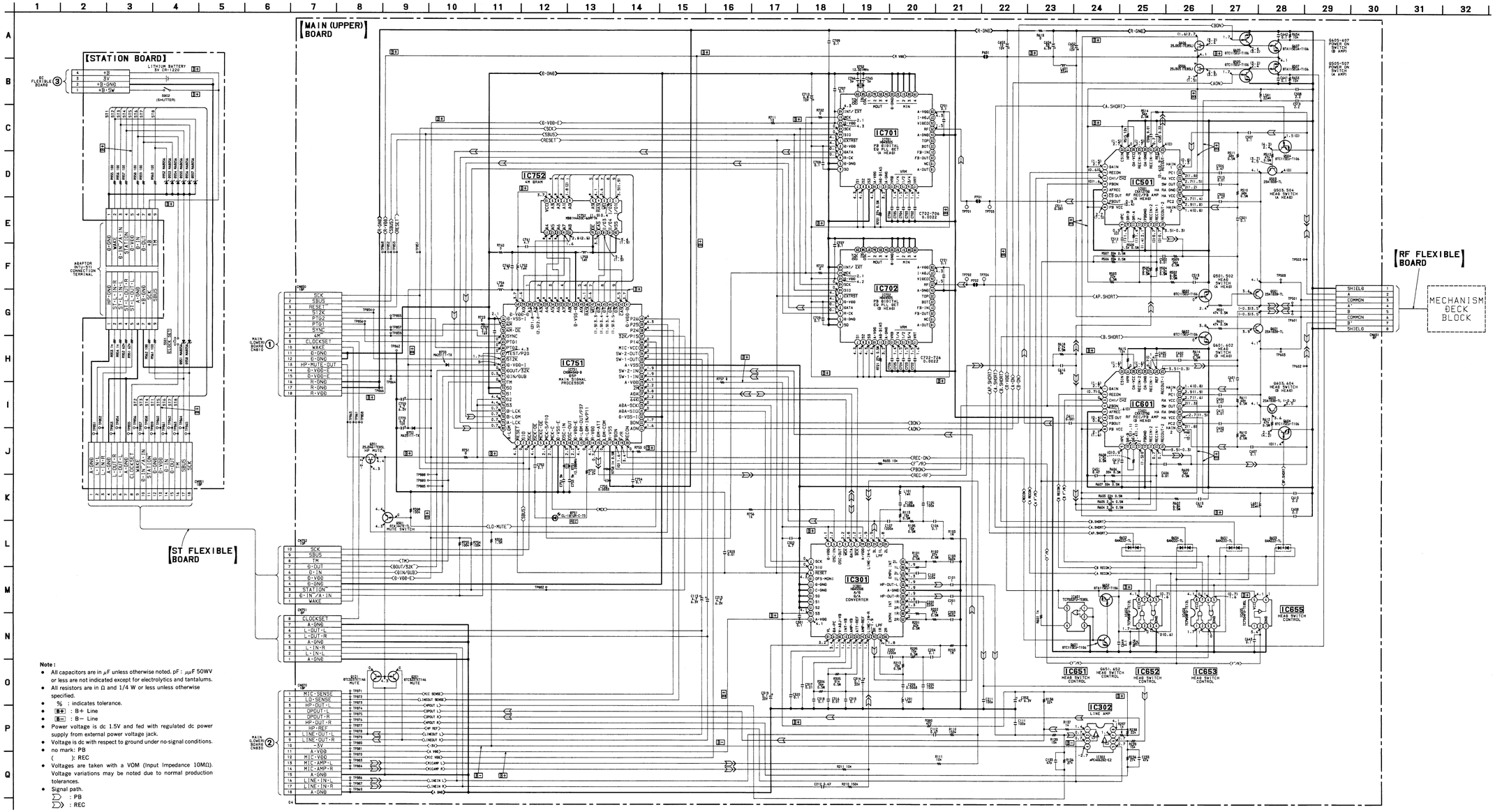
• **Semiconductor Location**

Ref. No.	Location
D651	D-13
D652	D-13
D653	D-13
D654	D-13
D751	B-5
D752	B-7
D759	B-7
D951	C-19
D952	C-19
D953	B-19
D954	C-19
D955	C-19
D956	C-17
D957	B-16
D958	C-19
IC301	C-12
IC302	B-13
IC501	E-13
IC601	F-3
IC651	D-12
IC652	D-3
IC653	D-12
IC655	D-4
IC701	F-11
IC702	F-5
IC751	D-6
IC752	C-9
Q101	B-13
Q201	B-13
Q301	E-9
Q351	F-7
Q501	F-13
Q502	E-12
Q503	F-14
Q504	E-14
Q505	D-13
Q506	D-13
Q507	E-14
Q601	G-4
Q602	F-12
Q603	F-3
Q604	E-14
Q605	E-4
Q606	E-3
Q651	F-2
Q652	F-2

Note :
• ▨ : Pattern on the side which is seen.
(The other layer's patterns are not indicated.)



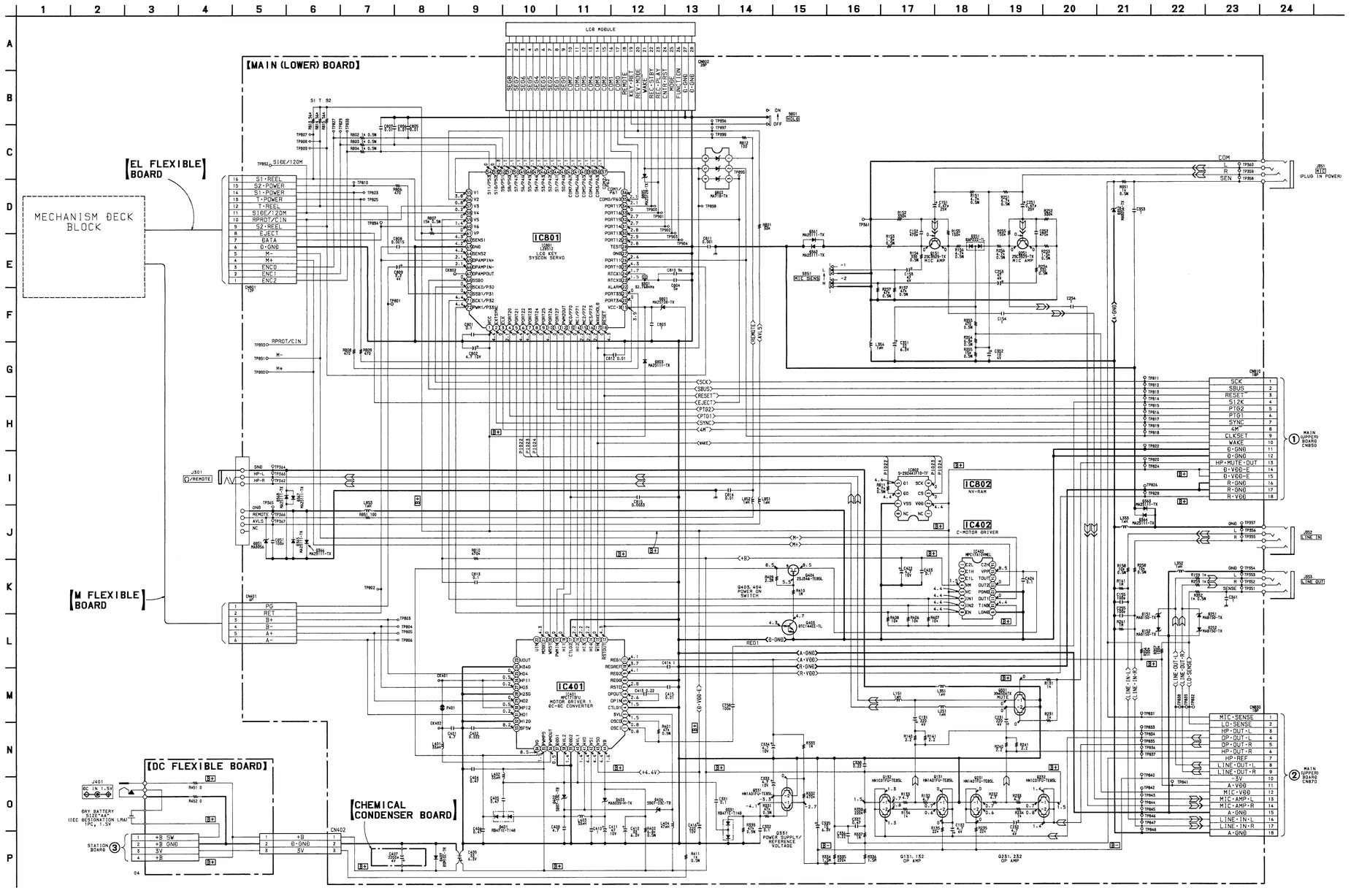
3-4. SCHEMATIC DIAGRAM—MAIN (UPPER) SECTION— • Refer to page 44 for IC Block Diagrams.



Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- B+ : B+ Line
- B− : B− Line
- Power voltage is dc 1.5V and fed with regulated dc power supply from external power voltage jack.
- Voltage is dc with respect to ground under no-signal conditions.
- no mark: PB
  ( ): REC
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ▷ : PB
  ▷ : REC

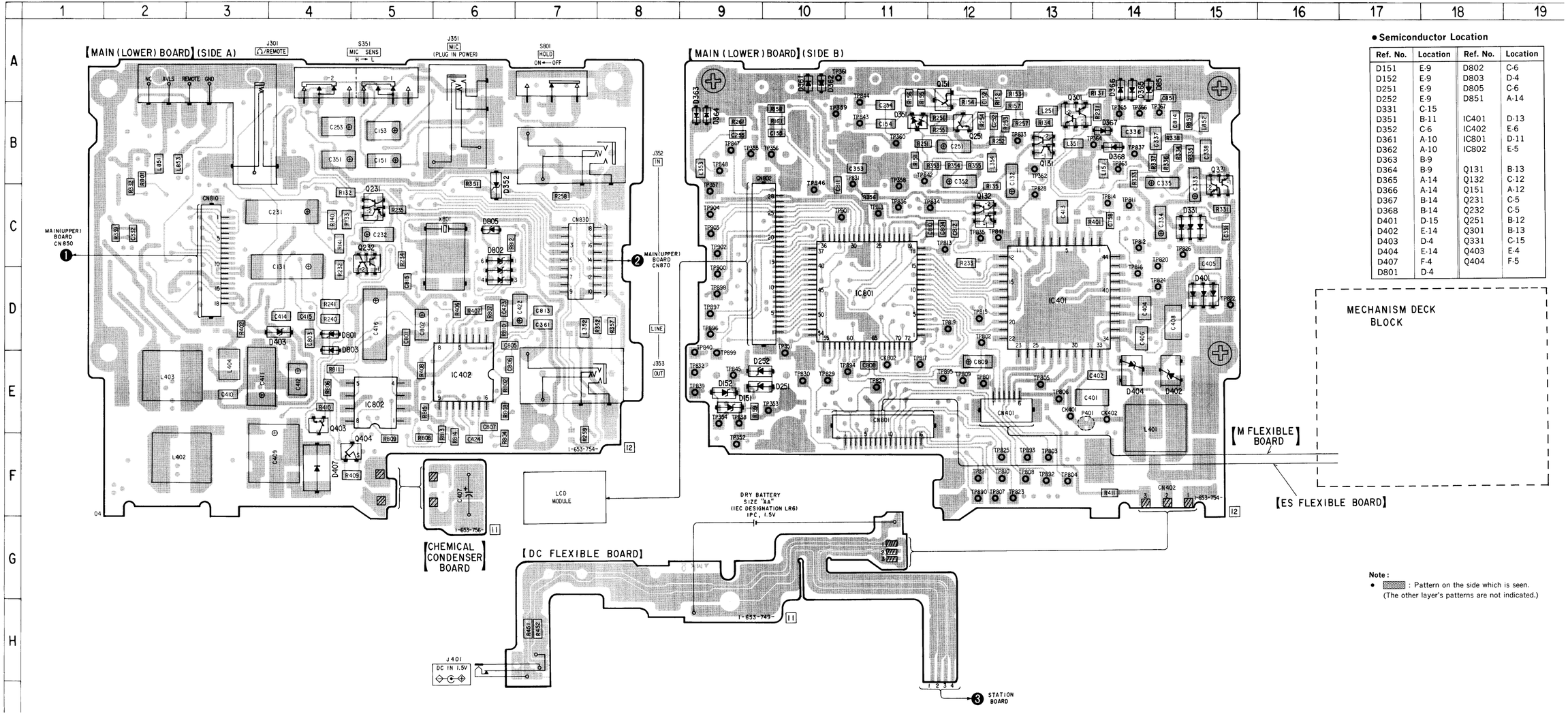
3-5. SCHEMATIC DIAGRAM—MAIN (LOWER) SECTION— • Refer to page 44 for IC Block Diagrams.



Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- (B+) : B+ Line
- (B−) : B− Line
- Power voltage is dc 1.5V and fed with regulated dc power supply from external power voltage jack.
- Voltage is dc with respect to ground under no-signal conditions.
- no mark: PB
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ▷ : PB
  ▷▷ : REC

3-6. PRINTED WIRING BOARDS—MAIN (LOWER) SECTION—



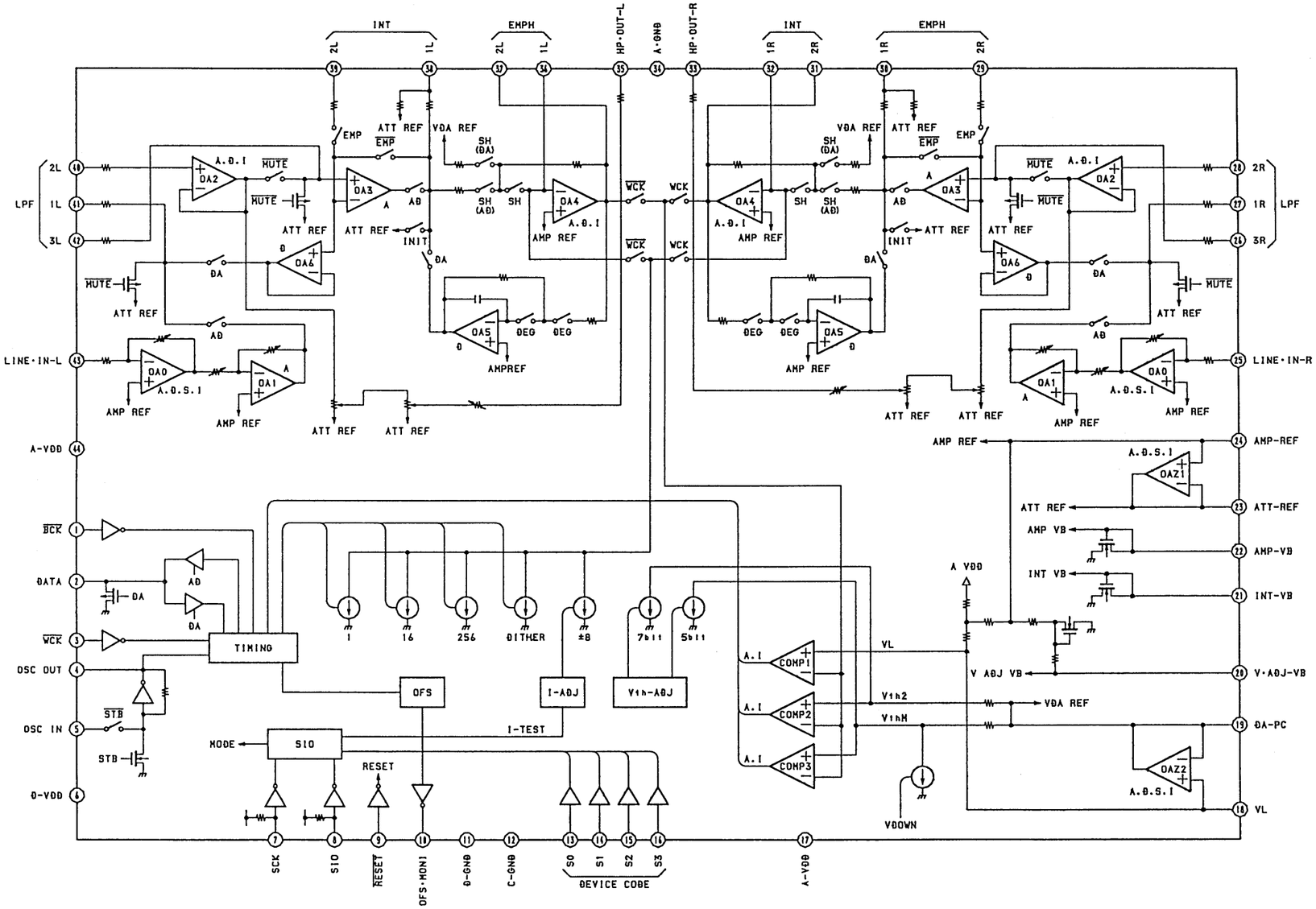
● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D151	E-9	D802	C-6
D152	E-9	D803	D-4
D251	E-9	D805	C-6
D252	E-9	D851	A-14
D331	C-15		
D351	B-11	IC401	D-13
D352	C-6	IC402	E-6
D361	A-10	IC801	D-11
D362	A-10	IC802	E-5
D363	B-9		
D364	B-9	Q131	B-13
D365	A-14	Q132	C-12
D366	A-14	Q151	A-12
D367	B-14	Q231	C-5
D368	B-14	Q232	C-5
D401	D-15	Q251	B-12
D402	E-14	Q301	B-13
D403	D-4	Q331	C-15
D404	E-14	Q403	E-4
D407	F-4	Q404	F-5
D801	D-4		

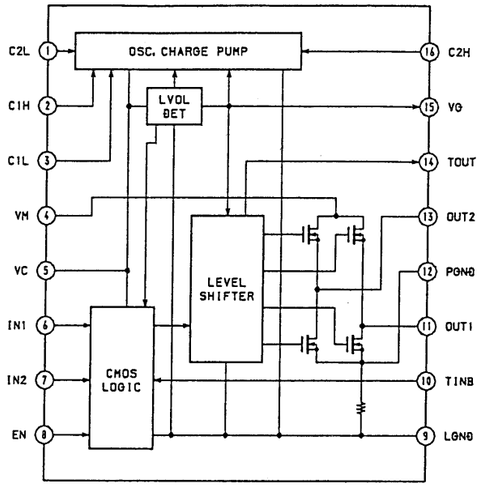
Note :
● ▨ : Pattern on the side which is seen.
(The other layer's patterns are not indicated.)

• **IC Block Diagrams**

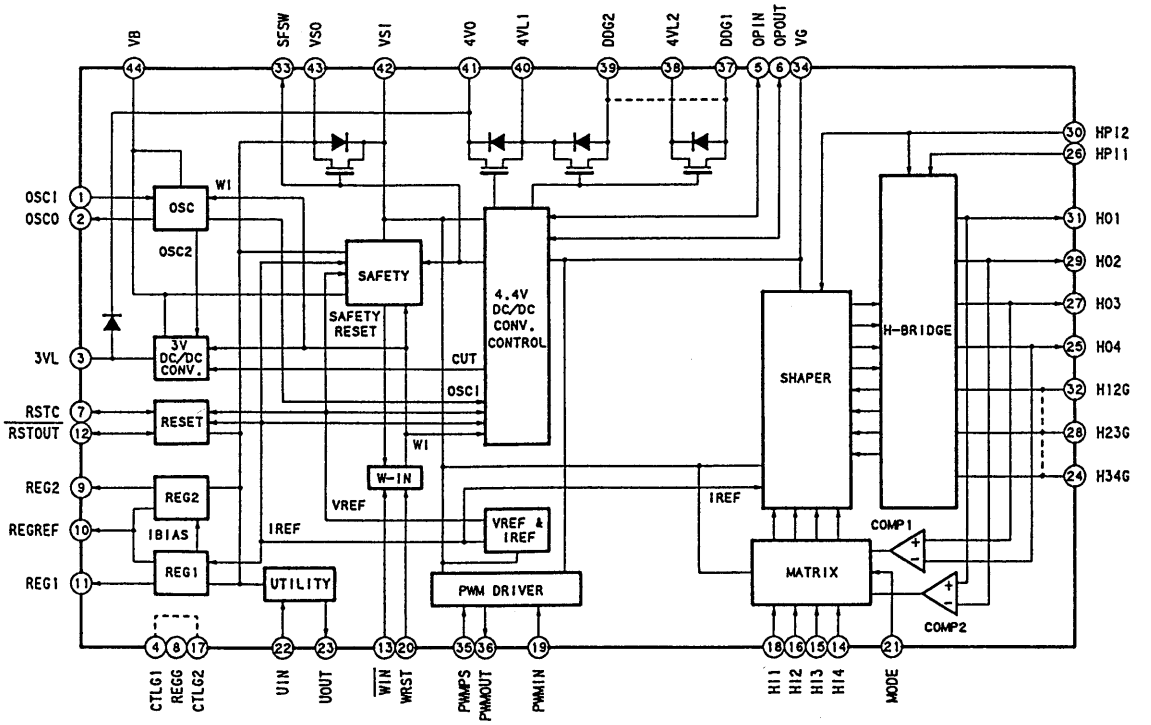
IC301 HD49308



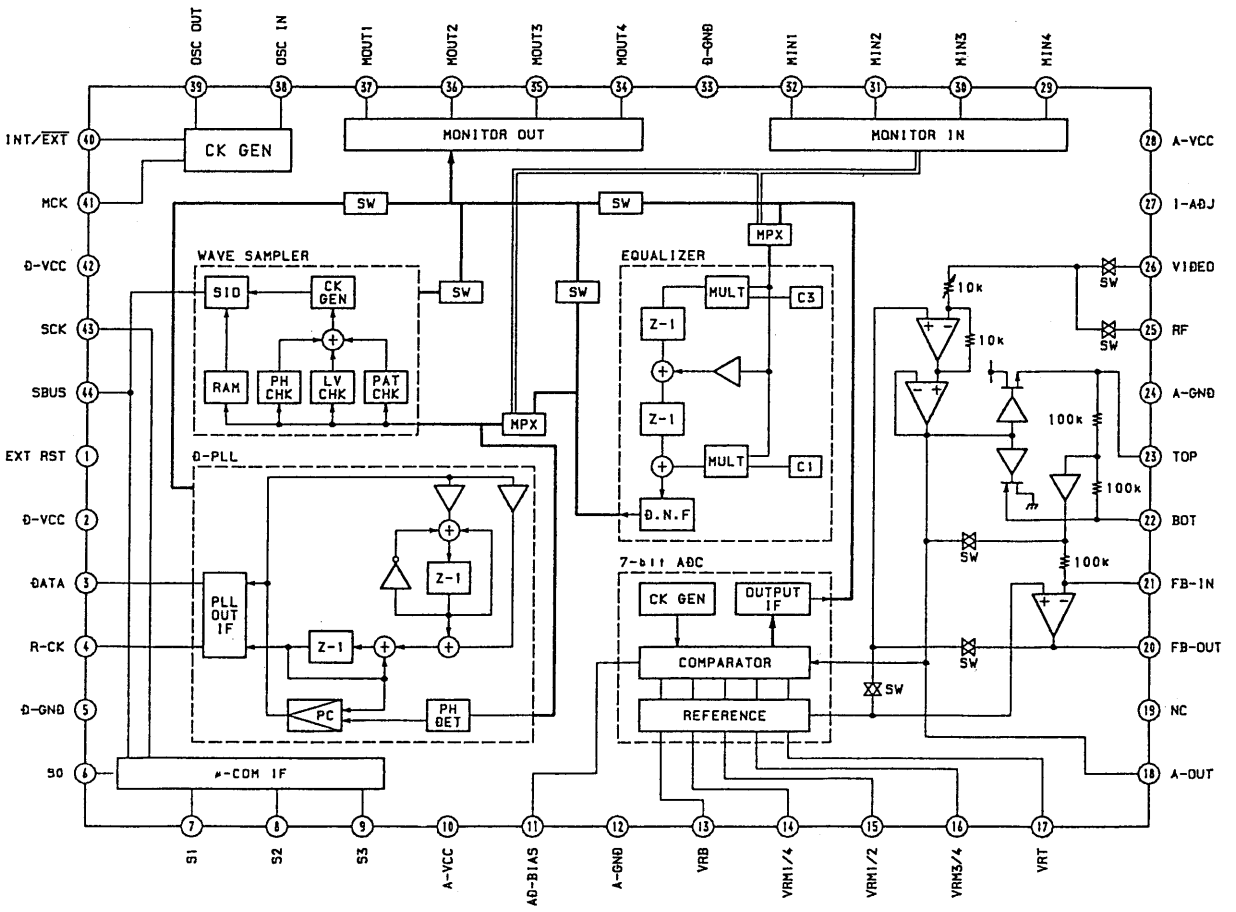
IC402 MPC17A10VM



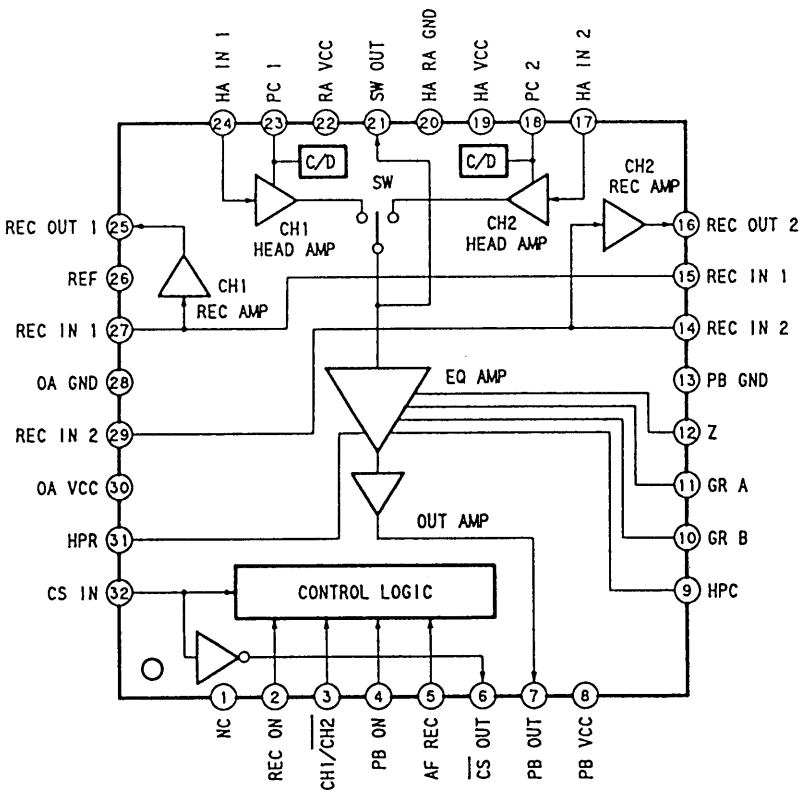
IC401 MPC1713FU



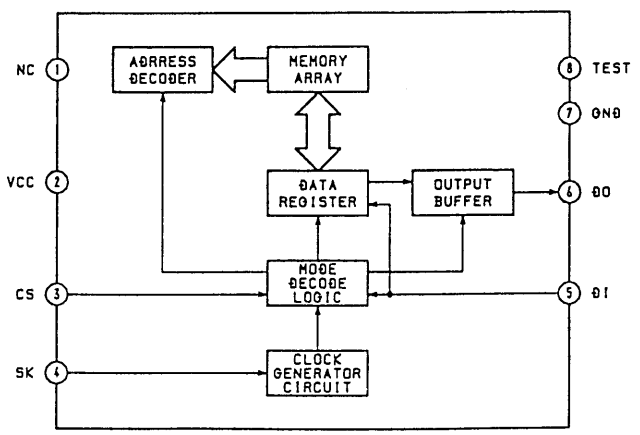
IC701, 702 HD49305



IC501, 601 CXA1275Q



IC802 S-2924AIF10-TF

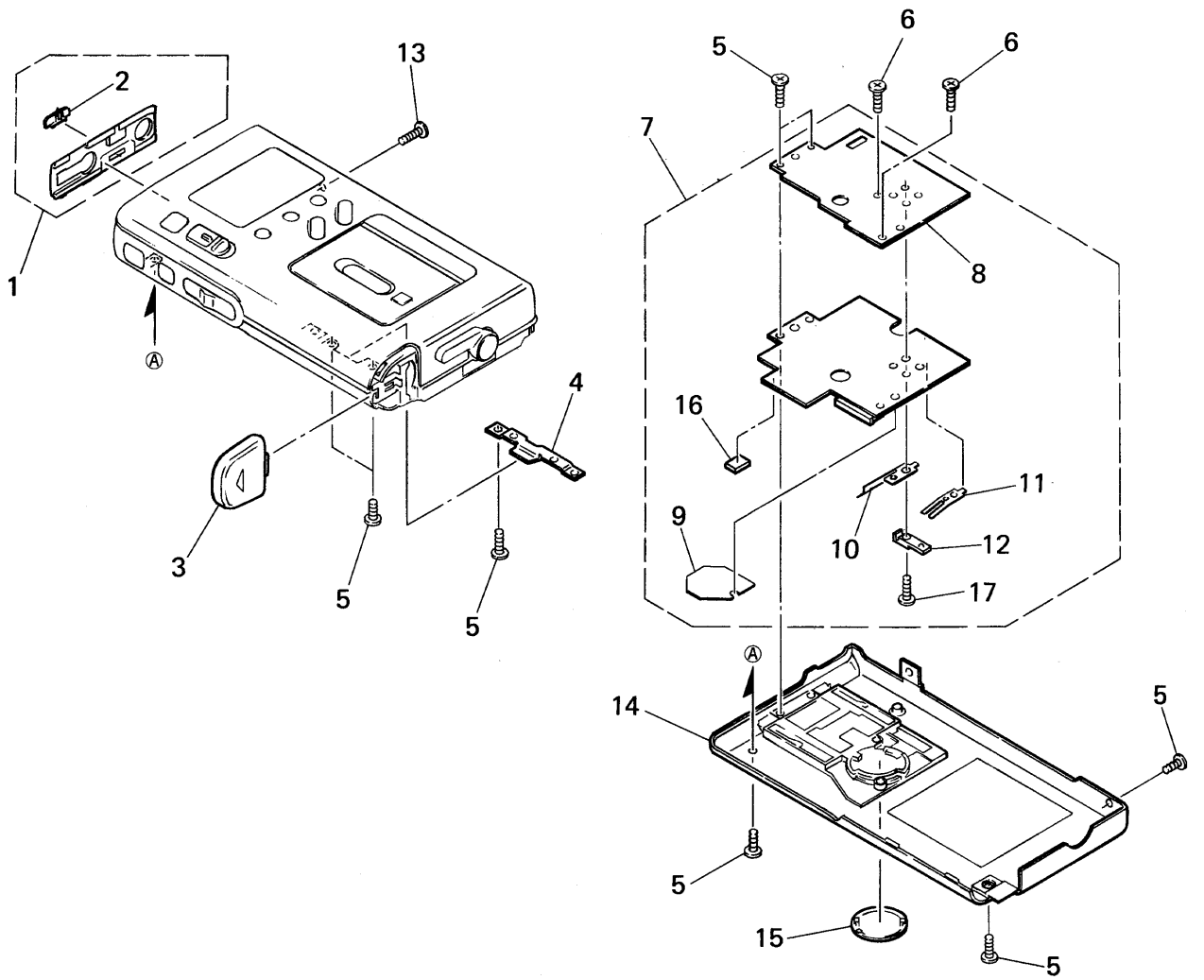


SECTION 4
EXPLODED VIEWS

NOTE:

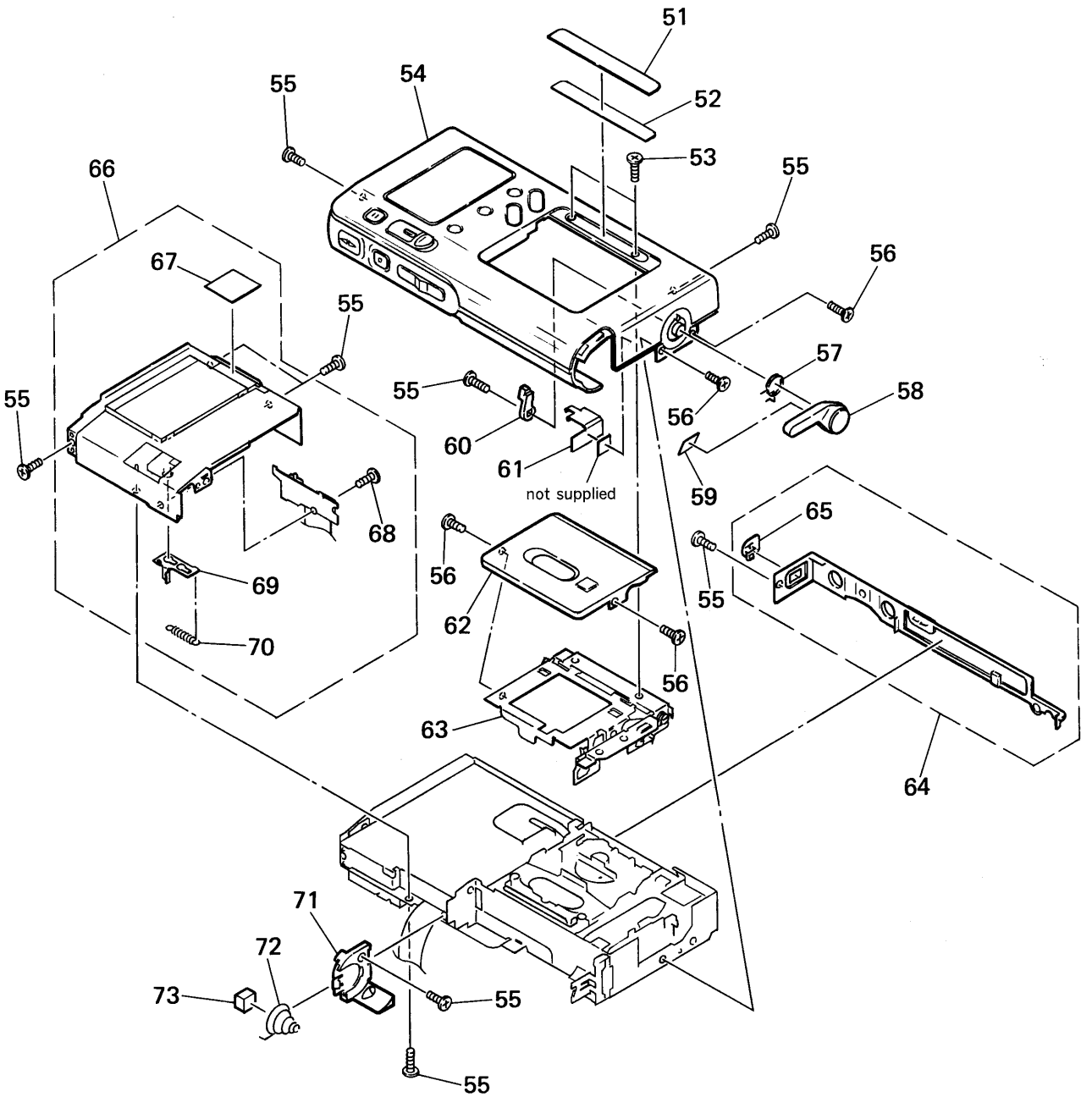
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

4-1. REAR PANEL SECTION



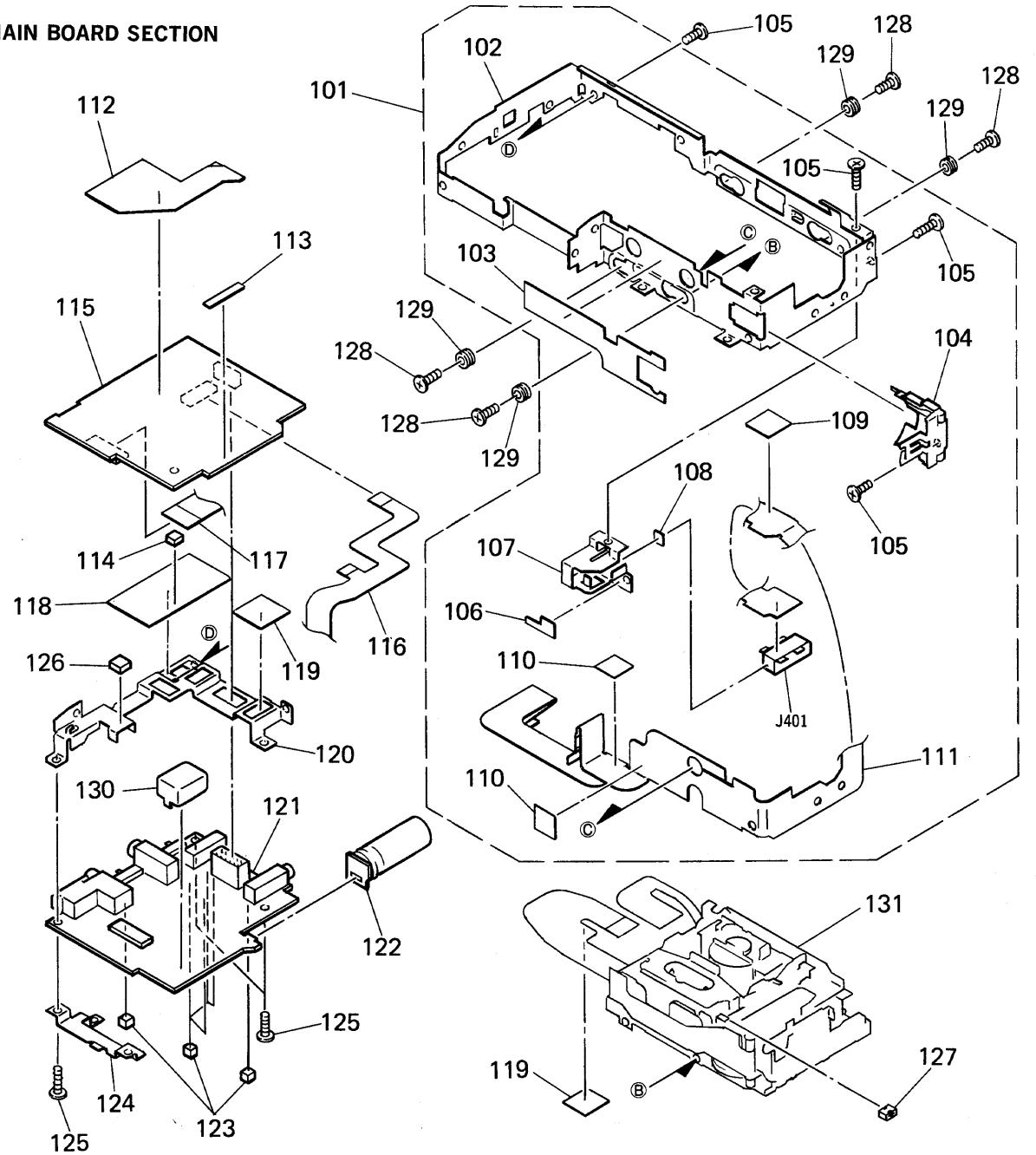
Ref. No.	Part No.	Description	Remark
1	X-4946-155-1	ORNAMENT (JACK) ASSY	
2	4-974-963-01	KNOB (ATT)	
3	4-974-953-01	LID (A), BATTERY CASE	
4	4-974-957-01	BRACKET (PANEL B)	
5	4-963-883-41	SCREW (M1.4), PRECISION PAN	
6	3-318-382-01	SCREW (1.7X3), TAPPING	
* 7	A-3276-506-A	STATION BOARD, COMPLETE	
8	4-968-522-01	BACKLINING (ST)	
9	4-968-521-01	SPACER (SP)	
10	4-968-539-01	TERMINAL (LI PLUS)	
11	4-968-540-01	TERMINAL (LI MINUS)	
12	4-968-520-01	HOLDER (LI TERMINAL)	
13	4-963-883-71	SCREW (M1.4), PRECISION PAN	
14	X-4946-157-1	PANEL (REAR) ASSY	
15	4-968-519-01	LID (LITHIUM), BATTERY CASE	
16	4-978-433-01	SPACER (ST-P)	
17	4-963-883-81	SCREW (M1.4), PRECISION PAN	

4-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	4-974-954-01	ORNAMENT (DRUM)	
52	4-974-955-01	SHEET (DRUM), ADHESIVE	
53	4-963-883-31	SCREW (M1.4), PRECISION PAN	
54	X-4946-152-1	PANEL (FRONT) ASSY	
55	4-963-883-41	SCREW (M1.4), PRECISION PAN	
56	4-968-524-11	SCREW (M1.4X1.4)	
57	4-974-965-01	SPRING (EJECT)	
58	4-974-929-01	LEVER (EJ.A)	
59	4-978-432-01	SPACER (EJ)	
60	4-974-930-01	LEVER (EJ.B)	
61	4-978-431-01	REINFORCEMENT (PANEL)	
62	X-4946-156-1	PANEL (CASSETTE) ASSY	
63	X-4945-174-1	PLATE ASSY, FULCRUM	
64	X-4946-158-1	ORNAMENT (LINE) ASSY	
65	4-974-945-01	KNOB (HOLD)	
66	A-3303-103-A	FRAME (LCD) BLOCK ASSY	
67	4-974-973-01	SPACER (PB)	
68	4-963-883-11	SCREW (M1.4), PRECISION PAN	
69	4-968-533-01	LEVER (REC.B)	
70	4-968-534-01	SPRING (POWER TENSION), TENSION	
71	4-968-531-01	HOLDER (SPRING)	
72	4-968-530-01	SPRING, BATTERY COIL	
73	4-979-882-01	SPACER (BATTERY SPRING)	

4-3. MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
* 101	A-3303-102-A	FRAME (A) BLOCK ASSY	
102	4-968-526-01	FRAME (A)	
103	4-968-527-01	SPACER (A)	
104	X-4945-170-1	TERMINAL (PLUS) ASSY	
105	4-963-883-41	SCREW (M1.4), PRECISION PAN	
106	4-968-528-01	SPACER (B)	
107	4-968-529-01	HOLDER (DC)	
108	4-968-535-01	SPACER (DC)	
109	4-974-971-01	SHEET (DCJ), INSULATING	
110	4-974-970-01	SHEET (DC), INSULATING	
111	1-653-749-11	DC FLEXIBLE BOARD	
* 112	4-974-967-01	PAPER (C), SHIELD	
* 113	4-974-968-01	SPACER (PU)	
* 114	4-978-434-01	SPACER (JM)	
115	A-3269-529-A	MAIN (UPPER) BOARD, COMPLETE	
116	1-653-750-11	ST FLEXIBLE BOARD	
117	1-776-257-11	CABLE, FLAT (18 CORE)	

Ref. No.	Part No.	Description	Remark
* 118	4-974-974-01	SPACER (PA)	
119	4-974-973-01	SPACER (PB)	
120	4-968-541-01	HOLDER (JACK)	
121	A-3269-531-A	MAIN (LOWER) BOARD, COMPLETE	
* 122	1-653-756-11	CHEMICAL CONDENSER BOARD	
123	4-974-969-01	SPACER (PP)	
124	4-974-956-01	BRACKET (PANEL A)	
125	3-335-797-21	SCREW (M1.4X3), TOOTHED LOCK	
* 126	4-978-435-01	SPACER (JP)	
* 127	4-943-323-01	COLLAR, INSULATING	
128	4-963-883-11	SCREW (M1.4), PRECISION PAN	
129	4-968-525-01	HOLDER (MD)	
* 130	4-968-543-01	CASE (A), SHIELD	
131	A-3250-412-A	MECHANISM DECK MN-2-113	
J401	1-764-628-11	JACK, DC (POLARITY UNIFIED TYPE) (DC IN 1.5V)	

SECTION 5
ELECTRICAL PARTS LIST

CHEMICAL CONDENSER | DC FLEXIBLE | MAIN (LOWER)

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	1-653-756-11	CHEMICAL CONDENSER BOARD			
		**********			
		< CAPACITOR >			
C407	1-109-971-11	ELECT	2200uF	20%	4V
**********					
	1-653-749-11	DC FLEXIBLE BOARD			
		**********			
		< JACK >			
J401	1-764-628-11	JACK, DC (PULARITY UNIFIED TYPE)			(DC IN 1.5V)
		< RESISTOR >			
R451	1-216-296-00	CONDUCTOR, CHIP	(3216)		
R452	1-216-296-00	CONDUCTOR, CHIP	(3216)		
**********					
	A-3269-531-A	MAIN (LOWER) BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C131	1-135-338-11	TANTAL. CHIP	220uF	20%	4V
C132	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C151	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C152	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C153	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C154	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C155	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C231	1-135-338-11	TANTAL. CHIP	220uF	20%	4V
C232	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C251	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C252	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C253	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C254	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C255	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C331	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C332	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C333	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C334	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C335	1-107-685-11	TANTAL. CHIP	15uF	20%	6.3V
C336	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C337	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C338	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C351	1-104-852-11	TANTAL. CHIP	22uF	20%	6.3V
C352	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C353	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C361	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C401	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C402	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C404	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C405	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C406	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C408	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C409	1-107-833-11	ELECT CHIP	33uF	20%	6.3V
C410	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C411	1-113-642-11	TANTAL. CHIP	47uF	20%	10V
C412	1-104-752-11	TANTAL. CHIP	33uF	20%	6.3V
C413	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C414	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C415	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C416	1-109-970-11	TANTALUM	220uF	20%	10V
C422	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C423	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C424	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C758	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C801	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C802	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C803	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C804	1-164-845-11	CERAMIC CHIP	5PF	0.25PF	16V
C805	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C806	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C807	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C808	1-164-938-11	CERAMIC CHIP	0.0015uF	10%	16V
C809	1-135-187-21	TANTAL. CHIP	2.2uF	20%	4V
C810	1-164-849-11	CERAMIC CHIP	9PF	0.5PF	16V
C811	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C812	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C813	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

MAIN (LOWER)

Ref. No.	Part No.	Description			Remark
C814	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C815	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C851	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
		< CONNECTOR >			
CN401	1-695-942-21	CONNECTOR, FPC (ZIF) 6P			
CN801	1-766-584-11	CONNECTOR, FPC (ZIF) 16P			
CN802	1-573-937-11	CONNECTOR, FFC/FPC (ZIF) 28P			
CN810	1-573-358-11	CONNECTOR, FFC/FPC 18P			
CN830	1-766-732-11	CONNECTOR, BOARD TO BOARD 18P			
		< DIODE >			
D151	8-719-017-89	DIODE	MA8150-TX		
D152	8-719-017-89	DIODE	MA8150-TX		
D251	8-719-017-89	DIODE	MA8150-TX		
D252	8-719-017-89	DIODE	MA8150-TX		
D331	8-719-975-46	DIODE	RB471E		
D351	8-719-991-00	DIODE	DAP222		
D352	8-719-422-46	DIODE	MA8056		
D361	8-719-046-91	DIODE	MA2S111		
D362	8-719-046-91	DIODE	MA2S111		
D363	8-719-046-91	DIODE	MA2S111		
D364	8-719-046-91	DIODE	MA2S111		
D365	8-719-046-91	DIODE	MA2S111		
D366	8-719-046-91	DIODE	MA2S111		
D367	8-719-046-91	DIODE	MA2S111		
D368	8-719-046-91	DIODE	MA2S111		
D401	8-719-975-46	DIODE	RB471E		
D402	8-719-980-38	DIODE	SB07-03C		
D403	8-719-421-24	DIODE	MA8039-H		
D404	8-719-980-38	DIODE	SB07-03C		
D407	8-719-031-18	DIODE	DSM10C-TR		
D801	8-719-046-85	DIODE	MA2S728		
D802	8-719-020-74	DIODE	MA718		
D803	8-719-046-91	DIODE	MA2S111		
D805	8-719-046-85	DIODE	MA2S728		
D851	8-719-422-46	DIODE	MA8056		
		< IC >			
IC401	8-759-038-80	IC	MPC1713FU		
IC402	8-759-266-60	IC	MPC17A10VM		
IC801	8-759-381-67	IC	LZ851215		
IC802	8-759-268-05	IC	S-2924AIF10		
		< JACK >			
J301	1-764-453-11	JACK (∩/REMOTE)			
J351	1-766-586-11	JACK (MIC (PLUG IN POWER))			
J352	1-766-586-11	JACK (LINE IN)			
J353	1-766-586-11	JACK (LINE OUT)			

Ref. No.	Part No.	Description			Remark
		< COIL >			
L151	1-412-979-21	INDUCTOR	1uH		
L251	1-412-979-21	INDUCTOR	1uH		
L351	1-412-979-21	INDUCTOR	1uH		
L352	1-412-979-21	INDUCTOR	1uH		
L353	1-412-979-21	INDUCTOR	1uH		
L354	1-412-979-21	INDUCTOR	1uH		
L401	1-409-852-11	COIL, CHOKE	33uH		
L402	1-409-851-11	COIL, CHOKE	33uH		
L403	1-409-852-11	COIL, CHOKE	33uH		
L404	1-412-031-11	INDUCTOR CHIP	47uH		
L851	1-412-979-21	INDUCTOR	1uH		
L852	1-412-979-21	INDUCTOR	1uH		
L853	1-412-979-21	INDUCTOR	1uH		
		< TRANSISTOR >			
Q131	8-729-427-70	TRANSISTOR	XP4401		
Q132	8-729-427-72	TRANSISTOR	XP4501		
Q151	8-729-429-74	TRANSISTOR	2SC3929		
Q231	8-729-427-70	TRANSISTOR	XP4401		
Q232	8-729-427-72	TRANSISTOR	XP4501		
Q251	8-729-429-74	TRANSISTOR	2SC3929		
Q301	8-729-425-18	TRANSISTOR	XN4504		
Q331	8-729-427-70	TRANSISTOR	XP4401		
Q403	8-729-928-81	TRANSISTOR	DTC144EE		
Q404	8-729-026-30	TRANSISTOR	2SJ346-TE85L		
		< RESISTOR >			
R131	1-218-953-11	METAL GLAZE	1K	5%	1/16W
R132	1-216-793-11	METAL GLAZE	4.7	5%	1/16W
R133	1-216-793-11	METAL GLAZE	4.7	5%	1/16W
R134	1-218-953-11	METAL GLAZE	1K	5%	1/16W
R135	1-218-969-11	METAL GLAZE	22K	5%	1/16W
R140	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R141	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R151	1-208-699-11	METAL GLAZE	4.7K	0.50%	1/16W
R152	1-218-983-11	METAL GLAZE	330K	5%	1/16W
R153	1-208-687-11	METAL GLAZE	1.5K	0.50%	1/16W
R154	1-208-671-11	METAL GLAZE	330	0.50%	1/16W
R155	1-218-979-11	METAL GLAZE	150K	5%	1/16W
R156	1-208-699-11	METAL GLAZE	4.7K	0.50%	1/16W
R157	1-208-927-11	METAL GLAZE	47K	0.50%	1/16W
R158	1-208-707-11	METAL CHIP	10K	0.50%	1/16W
R159	1-218-953-11	METAL GLAZE	1K	5%	1/16W
R161	1-218-989-11	METAL GLAZE	1M	5%	1/16W
R231	1-218-953-11	METAL GLAZE	1K	5%	1/16W
R232	1-216-793-11	METAL GLAZE	4.7	5%	1/16W
R233	1-216-793-11	METAL GLAZE	4.7	5%	1/16W

Ref. No.	Part No.	Description			Remark
R234	1-218-953-11	METAL GLAZE	1K	5%	1/16W
R235	1-218-969-11	METAL GLAZE	22K	5%	1/16W
R240	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R241	1-216-789-11	METAL CHIP	2.2	5%	1/16W
R251	1-208-699-11	METAL GLAZE	4.7K	0.50%	1/16W
R252	1-218-983-11	METAL GLAZE	330K	5%	1/16W
R253	1-208-687-11	METAL GLAZE	1.5K	0.50%	1/16W
R254	1-208-671-11	METAL GLAZE	330	0.50%	1/16W
R255	1-218-979-11	METAL GLAZE	150K	5%	1/16W
R256	1-208-699-11	METAL GLAZE	4.7K	0.50%	1/16W
R257	1-208-927-11	METAL GLAZE	47K	0.50%	1/16W
R258	1-208-707-11	METAL CHIP	10K	0.50%	1/16W
R259	1-218-953-11	METAL GLAZE	1K	5%	1/16W
R261	1-218-989-11	METAL GLAZE	1M	5%	1/16W
R331	1-208-927-11	METAL GLAZE	47K	0.50%	1/16W
R332	1-218-985-11	METAL GLAZE	470K	5%	1/16W
R333	1-218-989-11	METAL GLAZE	1M	5%	1/16W
R334	1-220-398-11	METAL GLAZE	1.5M	5%	1/16W
R335	1-218-981-11	METAL GLAZE	220K	5%	1/16W
R336	1-220-398-11	METAL GLAZE	1.5M	5%	1/16W
R337	1-218-989-11	METAL GLAZE	1M	5%	1/16W
R338	1-218-981-11	METAL GLAZE	220K	5%	1/16W
R339	1-208-927-11	METAL GLAZE	47K	0.50%	1/16W
R351	1-208-683-11	METAL GLAZE	1K	0.50%	1/16W
R352	1-208-683-11	METAL CHIP	1K	0.50%	1/16W
R353	1-208-675-11	METAL CHIP	470	0.50%	1/16W
R354	1-208-703-11	METAL CHIP	6.8K	0.50%	1/16W
R355	1-208-711-11	METAL CHIP	15K	0.50%	1/16W
R356	1-218-977-11	METAL GLAZE	100K	5%	1/16W
R357	1-218-977-11	METAL GLAZE	100K	5%	1/16W
R401	1-208-927-11	METAL GLAZE	47K	0.50%	1/16W
R402	1-208-703-11	METAL CHIP	6.8K	0.50%	1/16W
R406	1-218-965-11	METAL GLAZE	10K	5%	1/16W
R407	1-218-965-11	METAL GLAZE	10K	5%	1/16W
R408	1-218-965-11	METAL GLAZE	10K	5%	1/16W
R409	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R410	1-218-989-11	METAL GLAZE	1M	5%	1/16W
R411	1-208-683-11	METAL CHIP	1K	0.50%	1/16W
R801	1-218-971-11	METAL GLAZE	33K	5%	1/16W
R802	1-208-683-11	METAL CHIP	1K	0.50%	1/16W
R803	1-208-683-11	METAL CHIP	1K	0.50%	1/16W
R804	1-208-683-11	METAL CHIP	1K	0.50%	1/16W
R806	1-218-949-11	METAL GLAZE	470	5%	1/16W
R807	1-208-711-11	METAL CHIP	15K	0.50%	1/16W
R808	1-218-949-11	METAL GLAZE	470	5%	1/16W
R809	1-218-949-11	METAL GLAZE	470	5%	1/16W
R810	1-218-985-11	METAL GLAZE	470K	5%	1/16W
R811	1-208-699-11	METAL CHIP	4.7K	0.50%	1/16W
R812	1-218-941-11	METAL GLAZE	100	5%	1/16W
R813	1-218-974-11	METAL GLAZE	56K	5%	1/16W
R814	1-218-974-11	METAL GLAZE	56K	5%	1/16W
R815	1-218-974-11	METAL GLAZE	56K	5%	1/16W
R851	1-218-941-11	METAL GLAZE	100	5%	1/16W

< SWITCH >

S351	1-571-277-31	SWITCH, SLIDE (MIC SENS)
S801	1-762-078-11	SWITCH, SLIDE (HOLD)

< VIBRATOR >

X801	1-579-886-21	VIBRATOR, CRYSTAL (32.768kHz)

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A-3269-529-A MAIN (UPPER) BOARD, COMPLETE

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< CAPACITOR >

C101	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C102	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C103	1-165-138-11	CERAMIC CHIP	560PF	2%	50V
C104	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C105	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C107	1-164-670-11	CERAMIC CHIP	1200PF	5%	16V
C109	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C111	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C112	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C113	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C133	1-164-866-11	CERAMIC CHIP	47PF	5%	16V
C201	1-109-996-11	CERAMIC CHIP	1uF		6.3V
C202	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C203	1-165-138-11	CERAMIC CHIP	560PF	2%	50V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C207	1-164-670-11	CERAMIC CHIP	1200PF	5%	16V
C209	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C211	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C212	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C213	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C233	1-164-866-11	CERAMIC CHIP	47PF	5%	16V
C301	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C302	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C303	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C314	1-135-190-21	TANTAL. CHIP	0.1uF	20%	20V
C315	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C316	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C317	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C318	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C319	1-135-190-21	TANTAL. CHIP	0.1uF	20%	20V
C320	1-107-820-11	CERAMIC CHIP	0.1uF		16V

MAIN (UPPER)

Ref. No.	Part No.	Description			Remark
C353	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C501	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C502	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C503	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C504	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C505	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C506	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C507	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C508	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C510	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C511	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C512	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C513	1-164-854-11	CERAMIC CHIP	15PF	5%	16V
C515	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C601	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C602	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C603	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C604	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C605	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C606	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C607	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C608	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C610	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C611	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C612	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C613	1-164-854-11	CERAMIC CHIP	15PF	5%	16V
C615	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C616	1-164-843-11	CERAMIC CHIP	3PF	0.25PF	16V
C641	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C642	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C643	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C644	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C651	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C652	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C653	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C654	1-104-752-11	TANTAL. CHIP	33uF	20%	6.3V
C701	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C702	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C703	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C704	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C705	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C706	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C707	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C708	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C709	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C710	1-104-850-11	TANTAL. CHIP	6.8uF	20%	10V
C721	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C722	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C723	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V

Ref. No.	Part No.	Description			Remark
C724	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C725	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C726	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C727	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C728	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C751	1-164-849-11	CERAMIC CHIP	9PF	0.5PF	16V
C752	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C753	1-164-849-11	CERAMIC CHIP	9PF	0.5PF	16V
C754	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C755	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C757	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C759	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C760	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C761	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C765	1-164-845-11	CERAMIC CHIP	5PF	0.25PF	16V
C766	1-164-845-11	CERAMIC CHIP	5PF	0.25PF	16V
C770	1-104-850-11	TANTAL. CHIP	6.8uF	20%	10V

< CONNECTOR >

CN651	1-573-917-11	CONNECTOR, FFC/FPC (ZIF) 8P	
CN751	1-573-917-11	CONNECTOR, FFC/FPC (ZIF) 8P	
CN752	1-764-050-11	CONNECTOR, FPC (ZIF) 10P	
CN850	1-573-927-11	CONNECTOR, FFC/FPC (ZIF) 18P	
CN870	1-766-294-21	CONNECTOR, BOARD TO BOARD 18P	

< DIODE >

D651	8-719-989-03	DIODE	DAN222
D652	8-719-989-03	DIODE	DAN222
D653	8-719-989-03	DIODE	DAN222
D654	8-719-989-03	DIODE	DAN222
D751	8-719-033-72	LED	CL-181UR-C-TS (REC)
D752	8-719-046-91	DIODE	MA2S111
D759	8-719-046-91	DIODE	MA2S111

< IC >

IC301	8-759-323-36	IC	HD49308
IC302	8-759-142-20	IC	uPC4062G2
IC501	8-752-034-94	IC	CXA1275Q
IC601	8-752-034-94	IC	CXA1275Q
IC651	8-759-058-63	IC	TC7S32FU-TE85L
IC652	8-759-082-58	IC	TC7W08FU
IC653	8-759-082-58	IC	TC7W08FU
IC655	8-759-058-57	IC	TC7S04FU-TE85L
IC701	8-759-323-37	IC	HD49305
IC702	8-759-323-37	IC	HD49305
IC751	8-759-331-86	IC	CXD8494Q-B
IC752	8-759-349-44	IC	MB81V4400C-60PFTN

Ref. No.	Part No.	Description				Remark
		< COIL >				
L101	1-412-206-11	INDUCTOR	1mH			
L201	1-412-206-11	INDUCTOR	1mH			
L501	1-412-010-41	INDUCTOR CHIP	22uH			
L601	1-412-010-41	INDUCTOR CHIP	22uH			
L651	1-412-010-41	INDUCTOR CHIP	22uH			
L752	1-412-979-21	INDUCTOR	1uH			
L753	1-412-979-21	INDUCTOR	1uH			
L754	1-412-979-21	INDUCTOR	1uH			
		< TRANSISTOR >				
Q101	8-729-015-39	TRANSISTOR	DTC323TK			
Q201	8-729-015-39	TRANSISTOR	DTC323TK			
Q301	8-729-928-78	TRANSISTOR	DTA144TE			
Q351	8-729-026-30	TRANSISTOR	2SJ346-TE85L			
Q501	8-729-824-02	TRANSISTOR	2SA1838			
Q502	8-729-925-91	TRANSISTOR	DTC115EU			
Q503	8-729-824-02	TRANSISTOR	2SA1838			
Q504	8-729-925-91	TRANSISTOR	DTC115EU			
Q505	8-729-925-91	TRANSISTOR	DTC115EU			
Q506	8-729-023-89	TRANSISTOR	2SJ305(TE85L)			
Q507	8-729-028-77	TRANSISTOR	DTA115EUA-T106			
Q601	8-729-824-02	TRANSISTOR	2SA1838			
Q602	8-729-925-91	TRANSISTOR	DTC115EU			
Q603	8-729-824-02	TRANSISTOR	2SA1838			
Q604	8-729-925-91	TRANSISTOR	DTC115EU			
Q605	8-729-925-91	TRANSISTOR	DTC115EU			
Q606	8-729-023-89	TRANSISTOR	2SJ305(TE85L)			
Q607	8-729-028-77	TRANSISTOR	DTA115EUA-T106			
Q651	8-729-925-91	TRANSISTOR	DTC115EU			
Q652	8-729-028-77	TRANSISTOR	DTA115EUA-T106			
		< RESISTOR >				
R101	1-208-930-11	METAL GLAZE	62K	0.50%	1/16W	
R102	1-208-717-11	METAL CHIP	27K	0.50%	1/16W	
R103	1-218-989-11	METAL GLAZE	1M	5%	1/16W	
R105	1-208-711-11	METAL CHIP	15K	0.50%	1/16W	
R110	1-218-979-11	METAL GLAZE	150K	5%	1/16W	
R111	1-218-965-11	METAL GLAZE	10K	5%	1/16W	
R113	1-208-711-11	METAL CHIP	15K	0.50%	1/16W	
R136	1-218-970-11	METAL GLAZE	27K	5%	1/16W	
R137	1-218-953-11	METAL GLAZE	1K	5%	1/16W	
R138	1-218-969-11	METAL GLAZE	22K	5%	1/16W	
R139	1-218-967-11	METAL GLAZE	15K	5%	1/16W	
R201	1-208-930-11	METAL GLAZE	62K	0.50%	1/16W	
R202	1-208-717-11	METAL CHIP	27K	0.50%	1/16W	
R203	1-218-989-11	METAL GLAZE	1M	5%	1/16W	
R205	1-208-711-11	METAL CHIP	15K	0.50%	1/16W	

Ref. No.	Part No.	Description				Remark
R210	1-218-979-11	METAL GLAZE	150K	5%	1/16W	
R211	1-218-965-11	METAL GLAZE	10K	5%	1/16W	
R213	1-208-711-11	METAL CHIP	15K	0.50%	1/16W	
R236	1-218-970-11	METAL GLAZE	27K	5%	1/16W	
R237	1-218-953-11	METAL GLAZE	1K	5%	1/16W	
R238	1-218-969-11	METAL GLAZE	22K	5%	1/16W	
R239	1-218-967-11	METAL GLAZE	15K	5%	1/16W	
R305	1-220-206-11	METAL GLAZE	91K	0.50%	1/16W	
R306	1-218-974-11	METAL GLAZE	56K	0.50%	1/16W	
R308	1-218-977-11	METAL GLAZE	100K	5%	1/16W	
R358	1-220-398-11	METAL GLAZE	1.5M	5%	1/16W	
R380	1-218-949-11	METAL GLAZE	470	5%	1/16W	
R501	1-208-927-11	METAL GLAZE	47K	0.50%	1/16W	
R502	1-208-703-11	METAL CHIP	6.8K	0.50%	1/16W	
R503	1-208-715-11	METAL CHIP	22K	0.50%	1/16W	
R504	1-208-691-11	METAL CHIP	2.2K	0.50%	1/16W	
R505	1-208-691-11	METAL CHIP	2.2K	0.50%	1/16W	
R506	1-208-721-11	METAL CHIP	39K	0.50%	1/16W	
R507	1-208-721-11	METAL CHIP	39K	0.50%	1/16W	
R508	1-208-687-11	METAL CHIP	1.5K	0.50%	1/16W	
R509	1-218-974-11	METAL GLAZE	56K	0.50%	1/16W	
R510	1-208-931-11	METAL GLAZE	68K	0.50%	1/16W	
R511	1-208-931-11	METAL GLAZE	68K	0.50%	1/16W	
R512	1-208-927-11	METAL GLAZE	47K	0.50%	1/16W	
R514	1-218-974-11	METAL GLAZE	56K	0.50%	1/16W	
R515	1-218-966-11	METAL GLAZE	12K	5%	1/16W	
R601	1-208-927-11	METAL GLAZE	47K	0.50%	1/16W	
R602	1-208-703-11	METAL CHIP	6.8K	0.50%	1/16W	
R603	1-208-715-11	METAL CHIP	22K	0.50%	1/16W	
R604	1-208-691-11	METAL CHIP	2.2K	0.50%	1/16W	
R605	1-208-691-11	METAL CHIP	2.2K	0.50%	1/16W	
R606	1-208-721-11	METAL CHIP	39K	0.50%	1/16W	
R607	1-208-721-11	METAL CHIP	39K	0.50%	1/16W	
R608	1-208-687-11	METAL CHIP	1.5K	0.50%	1/16W	
R609	1-218-974-11	METAL GLAZE	56K	0.50%	1/16W	
R610	1-208-931-11	METAL GLAZE	68K	0.50%	1/16W	
R611	1-208-931-11	METAL GLAZE	68K	0.50%	1/16W	
R612	1-208-927-11	METAL GLAZE	47K	0.50%	1/16W	
R614	1-218-974-11	METAL GLAZE	56K	0.50%	1/16W	
R615	1-218-966-11	METAL GLAZE	12K	5%	1/16W	
R618	1-208-693-11	METAL CHIP	2.7K	0.50%	1/16W	
R619	1-216-295-00	CONDUCTOR, CHIP		(2012)		
R651	1-218-953-11	METAL GLAZE	1K	5%	1/16W	
R653	1-218-965-11	METAL GLAZE	10K	5%	1/16W	
R654	1-218-965-11	METAL GLAZE	10K	5%	1/16W	
R655	1-218-965-11	METAL GLAZE	10K	5%	1/16W	
R656	1-218-967-11	METAL GLAZE	15K	5%	1/16W	
R701	1-208-717-11	METAL CHIP	27K	0.50%	1/16W	
R702	1-216-864-11	METAL CHIP	0	5%	1/16W	

MAIN (UPPER) ST FLEXIBLE STATION

Ref. No.	Part No.	Description			Remark
R711	1-216-797-11	METAL CHIP	10	5%	1/16W
R721	1-208-717-11	METAL CHIP	27K	0.50%	1/16W
R722	1-216-864-11	METAL CHIP	0	5%	1/16W
R723	1-216-864-11	METAL CHIP	0	5%	1/16W
R751	1-216-864-11	METAL CHIP	0	5%	1/16W
R752	1-218-957-11	METAL GLAZE	2.2K	5%	1/16W
R753	1-216-864-11	METAL CHIP	0	5%	1/16W
R754	1-218-977-11	METAL GLAZE	100K	5%	1/16W
R755	1-218-977-11	METAL GLAZE	100K	5%	1/16W
R756	1-218-990-11	CONDUCTOR, CHIP		(1005)	
R757	1-216-864-11	METAL CHIP	0	5%	1/16W
R758	1-208-683-11	METAL CHIP	1K	0.50%	1/16W
R760	1-216-864-11	METAL CHIP	0	5%	1/16W
		< VIBRATOR >			
X751	1-760-139-31	VIBRATOR, CRYSTAL (12.288MHz)			
X752	1-767-019-11	VIBRATOR, CRYSTAL (12.501MHz)			
**********					
	1-653-750-11	ST FLEXIBLE BOARD			
		**********			
**********					
*	A-3276-506-A	STATION BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
CN951	1-573-358-11	CONNECTOR, FFC/FPC 18P			
		< DIODE >			
D951	8-719-422-46	DIODE MA8056			
D952	8-719-422-46	DIODE MA8056			
D953	8-719-422-46	DIODE MA8056			
D954	8-719-422-46	DIODE MA8056			
D955	8-719-422-46	DIODE MA8056			
D956	8-719-422-46	DIODE MA8056			
D957	8-719-422-46	DIODE MA8056			
D958	8-719-422-46	DIODE MA8056			
		< RESISTOR >			
R951	1-218-447-11	METAL GLAZE	62K	5%	1/16W
R952	1-218-447-11	METAL GLAZE	62K	5%	1/16W
R953	1-216-821-11	METAL CHIP	1K	5%	1/16W
R954	1-216-821-11	METAL CHIP	1K	5%	1/16W
R955	1-216-809-11	METAL CHIP	100	5%	1/16W
R956	1-216-809-11	METAL CHIP	100	5%	1/16W
R957	1-216-809-11	METAL CHIP	100	5%	1/16W
R958	1-216-809-11	METAL CHIP	100	5%	1/16W
R959	1-216-809-11	METAL CHIP	100	5%	1/16W
R960	1-216-809-11	METAL CHIP	100	5%	1/16W
R961	1-216-809-11	METAL CHIP	100	5%	1/16W
R962	1-216-809-11	METAL CHIP	100	5%	1/16W
		< SWITCH >			
S301	1-572-921-11	SWITCH, KEY BOARD (CLOCK SET)			
S902	1-762-088-11	SWITCH, LEAF (SHUTTER)			
**********					
		MISCELLANEOUS			
		**********			
117	1-776-257-11	CABLE, FLAT (18 CORE)			
**********					
		ACCESSORIES & PACKING MATERIALS			
		**********			
	1-467-824-11	REMOTE CONTROL UNIT			
	1-528-357-11	BATTERY, LITHIUM (CR1220)			
	1-542-071-11	MICROPHONE (C-3001)			
	1-559-906-32	CORD, CONNECTION			
⚠	1-569-007-11	ADAPTOR, CONVERSION 2P			
⚠	1-693-148-21	ADAPTOR, AC (AC-NT2)			
	3-800-895-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH)			
	3-800-895-51	MANUAL, INSTRUCTION (JAPANESE, KOREAN)			
	4-968-758-01	CASE, CARRYING			
*	4-979-804-01	INDIVIDUAL CARTON			
	8-953-393-90	HEADPNONE MDR-E565MP SET			

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

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